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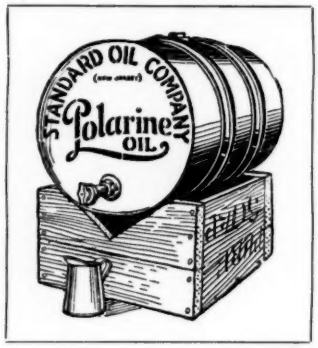

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Original Communications

HISTORY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY IN VIRGINIA.*

By JOSEPH A. WHITE, M. D., Richmond, Va.

I have been requested to impose myself upon your good nature for a few moments to welcome you to the Capital of this great Commonwealth for the purpose of forming an association of the medical men who devote their time and abilities to caring for those suffering from diseases of the Eye, Ear, Throat and Nose in this, our home State of Virginia, to be known as the "Virginia Society of Ophthalmology and Oto-Laryngology," and to give you at the same time a brief history of the development of this specialty in Virginia.

The first and most pleasant part of this duty might more appropriately have been put at the beginning of this day when I first had the pleasure of shaking by the hands so many of my present colleagues and former students, instead of near the end of our inaugural session. Words of welcome, however, if coming from the heart instead of the head, are never amiss, whether extended early or late, and I believe you will realize before you leave that we are glad to have you with us. I wish, however, especially to extend a hearty welcome to two of my old friends, Doctors de Schweinitz and Woods (I don't like to say how long I have known them) and to one of more recent date—Dr. Bordley, as they have only shortly arrived in Richmond, although their reputation long ago preceded them, and they are well-known to all of you for their eminence in the ophthalmological world, even if you do not know them personally, and we feel highly honored that they were good enough to come to our initial session and help in the organization of our Virginia Society.

*Address before the organization meeting of the Virginia Society of Oto-Laryngology and Ophthalmology, February 3, 1921.

The latter part of the burden was put on my shoulders because I happened to be older than any other one of you (as far as years counted) and because for the same reason I happened to antedate all of you in this line of work in Virginia.

When asked to give a historical sketch of ophthalmology et alias in Virginia, only two weeks ago, I thought the time too short to get accurate data on this subject, and fear you may find it lacking in that complete information it should present to you, but I ask your indulgence for its shortcomings and request those of you who can add anything of interest, or help me to perfect this sketch for publication, to be kind enough to come to my aid before it goes to press.

Forty years ago I was invited to Richmond, then a town of about 65,000 people, as there was no specialist in this State and none between Washington and New Orleans, except my old friend Dr. Calhoun, in Atlanta. The eye and ear were practically sealed books to the profession of this State, even to the best informed men of this, the leading city.

A Dr. Thomas, who died just before I came here, had given some attention to the eye, and Dr. Frank Cunningham, one of the leading surgeons, attended to eye troubles among his multifarious work. Cataract was operated on by the old couching method and the rest of the ophthalmological work was equally antiquated.

I never quite understood how I was honored by the invitation from some of the leading men here, unless it was due to having met some of them at the American Medical Association's meeting at Atlanta, in 1879. I had been in my home town of Baltimore for a short while after spending several years in Europe in the ophthalmological and aural clinics, and occupied the chair of ophthalmology in the old Washington University School of Medicine, when the invitation was extended to me, and,

as it was in the days of the rivalry and contention between Drs. Chisolm and Reuling (who managed between them to occupy the public eye to the practical exclusion of everyone else in their line of work) I was not averse to getting away from this professional battlefield to a quieter precinct, where my work would have a chance of recognition. And this was how I came to be the pioneer of this line of work in Virginia.

Although fifteen or more years had passed since the Civil War, there was still a lingering remnant of the antagonism to so-called Yankees to make it anything but pleasant at times to one who came from beyond the Potomac, unless he was known to come from Maryland, and I was often called a "Northern Yankee" by some who thought me begotten much further north and sometimes given the go-by in consequence. But on the whole I had nothing to complain of in the way I was received and treated in this community.

Richmond, however, in those days was quite a Puritanical town (like most small places where everybody knew everybody else's business) and there were some things done where I came from that were not accepted here. The observance of the Sabbath was very strict and, whilst you could cook your food and might even kiss your wife (if you did it where no one could see you) you were not expected to drive your family out in your carriage on that day, and I was by some folks considered a kind of heathen because I did so.

I was also looked at askance by others, because, with a few genial souls, I kept a pack of hounds and went over to Chesterfield fox-hunting once a week in the season—and this, mind you, gentlemen, was in "Ole Virginy," the cradle in this country of the old English custom of riding to hounds. This was all right for other people, but not for a city doctor. You had to be a doctor or a fox-hunter, but you could not be both, and I was often damned as "that fox-hunting doctor" on more than one occasion when it was suggested that I be consulted. The adage of "Mens sana in corporo sano" was old as the hills, and yet in those days if you would keep on good terms with your professional clientele, you had to be at their beck and call every hour in the twenty-four.

You could get drunk—that was a mere peccadillo—as many people would rather have their own doctor drunk than any other doctor sober (the Drys being scarce in those days) but you could not waste time in any physical exercise. How times have changed! Now a doctor can hunt, fish, ride, golf, dance, and indulge in any kind of physical exercise, except actual prize-fighting, without losing caste. In fact, the pendulum has swung so far the other way, that a doctor who does none of these things is looked on as an old fogy, who fails to recognize that if he wishes to keep mentally alert he must keep physically fit. But he can't get drunk any longer, even if the Dry Law allows him the wherewithal. Notwithstanding the little drawbacks referred to, I was not long here before I found myself very much at home and in very successful practice. As there was no Chair of Ophthalmology or Oto-Laryngology in the Old Medical College of Virginia, in Richmond; nor at the University of Virginia, at Charlottesville, and no clinic in these branches at either school, my first endeavor was to establish an outdoor service for the poor of the city, to serve also as a nucleus for clinical teaching.

A small tenement was rented in Broad street, in a locality now covered by splendid stores, and it was well attended from the start. Soon an indoor department became necessary and a small house was rented on Fourth street, between Main and Franklin streets, with nine beds, and the dispensary conducted in the basement.

A charter was procured in 1881, with a number of prominent physicians and citizens as incorporators, and the Richmond Eye, Ear and Throat Dispensary was established with Dr. Orlando Fairfax as President and Mr. John H. Montague as Treasurer, and with a Board composed of Dr. John G. Skelton, Col. Archer Anderson, Gen. Jos. E. Johnston, Col. A. S. Buford, Mr. Jas. Alfred Jones and Mr. John L. Bacon.

The attending staff was myself and Doctors Chas. M. Shields and Phil Taylor as assistants in charge of the dispensary. In 1882 Dr. John G. Skelton was made President, Dr. Orlando Fairfax having died during the year, and with the same board and staff. In 1883 Dr. Alfred Palmer was added to the staff. In 1885 the work in the Infirmary had grown so much that more room was needed. The charter was amended, giving the institution the right to acquire real estate, and the building on Gov-

ernor street was purchased, giving accommodations to twenty-four patients.

From 1881 and 1882 to 1886 the same staff continued in the service of the infirmary and in that year Doctors Shields and Taylor resigned and their places were taken by Dr. C. A. Blanton and Dr. E. C. Smith. In 1887 Dr. Palmer resigned and located in Norfolk, and I think he was the first specialist in that city. It might be of interest also to state that Dr. Alexander Duane, now of New York, was associated with Dr. Palmer for a while. When Dr. Palmer resigned, Dr. W. A. Gordon and Dr. L. C. Bosher were elected to the staff. The same year Dr. C. B. Blubaugh was house surgeon, and later settled in Parkersburg, W. Va.

In 1888, Dr. Garcin was added to the staff; also Dr. Kuyk, who served several years.

In 1889, Dr. Jeff Kinney was made house surgeon, and in the Fall of 1890 he resigned and located in Roanoke—probably the first specialist there, although I am not sure of this fact.

In 1890, Dr. James B. McCaw was elected President of the Board, following the death of Dr. John G. Skelton. The same year Dr. McGilvray was made house surgeon, and Dr. John Dunn was elected to the staff.

1892, Dr. McGilvray resigned and went to the northwest to locate. Dr. McMurran was appointed house surgeon, and in 1893 settled in Portsmouth.

1893, Dr. Myers was house surgeon until 1895, when he resigned and located in Danville, the first specialist there, although later he moved to Norfolk.

1895, he was succeeded by Dr. John Woodward, who also went to Norfolk in 1897.

1897, he was succeeded by Dr. May, who located in Danville, taking the place vacated by Dr. Myers.

1899, Dr. Ferguson was Dr. May's successor, and he, when his term was over, located in Columbia, S. C.

1898, Dr. Mercer was added to the staff, and I believe served on the staff for twelve or fourteen years. He is now Professor of Laryngology in the Medical College of Virginia.

1900, Dr. Luther Robertson was house surgeon, and in 1904 located in Danville.

1904, Dr. Atwood Forrer became house surgeon, and located in Harrisonburg in 1907. He was succeeded by Dr. Baggarly, who gave promise of a brilliant career, but was carried off by typhoid fever.

Dr. Morgan, now of Norfolk, and Dr. Weatherly, of this city, were later internes; Dr. Wilcox, the first specialist in Petersburg, and Dr. Edmond, of Clifton Forge, Dr. John Dunn's former assistants, were also on the dispensary staff of the Eye Infirmary.

You will pardon this tiresome rehearsal of the various internes, staff, appointments, etc., but my excuse for so doing is my desire to show how much influence this old institution has had in the development of ophthalmology in Virginia. From it went out the pioneer practitioners in this line in most of our towns—Norfolk, Roanoke, Danville, Portsmouth, Newport News, Petersburg and Clifton Forge—and that they benefited by their connection with the institution and its teaching facilities was fully demonstrated by the fact that they, one and all, were successful men who had the confidence of the profession where they located and could hold their own with representatives of other schools of ophthalmology. I might also mention many others who had their first lessons in ophthalmology in its wards and dispensary, a number of whom are present at this meeting—certainly all of you who graduated in the University College of Medicine between 1893 and 1913, when it was merged in the Medical College of Virginia.

There are very few practitioners of ophthalmology in Richmond who have not, at one time or another, "done time" (not in a disparaging sense) in either the out or indoor department of the infirmary. Among them were Dr. Gill, who was on the staff from 1908 to 1914; Dr. Blackwell, Dr. Hopkins, Dr. Henderson, Dr. Hodnett and others.

Instruction in ophthalmology was begun in 1881, when I was asked by the Dean of the Medical College of Virginia to give a series of lectures on this subject. I did so for two or three sessions and then requested the establishment of the Chair of Ophthalmology, as had already been done by so many of our medical colleges, but my request was considered too drastic an innovation, as the faculty considered ophthalmology a mere minor subject, not worthy of the exalted position of a professional chair, and I was accordingly turned down.

In 1884, Dr. Shields, my then assistant in the infirmary, was appointed lecturer in

ophthalmology and otology and continued in that position until the session of 1903 and 4, when the chair was finally established. He did not enjoy his elevation to the professorship very long, as he, unfortunately, died in 1897. Pending the appointment of his successor, Dr. Kuyk delivered the lectures on this subject. A year or more later, Dr. Davidson was elected Professor of Diseases of the Eye, Ear and Throat and occupied this chair until 1904, when it was divided, and Dr. Clifton Miller was made Professor of the Diseases of the Throat.

When Dr. Davidson died (1911), Dr. Wright, who was associated with him in practice, succeeded to his chair, which he held until the amalgamation of the Medical College of Virginia with the University College of Medicine, the latter school having been established in 1903.

From 1884 until 1893 I continued my clinics daily at the Eye Infirmary, not only for the instruction and benefit I myself derived from it, but also for any who chose to avail themselves of the advantages, and some of the students from the Medical College, as well as graduates of medicine, who were taking what they dignified as a post-graduate course, did so.

In 1893, however, the University College of Medicine was established, as the Medical College of Virginia seemed almost moribund, having in 1892-3 only 38 students.

The birth of the new school was the stimulus required to make the old school sit up and take notice, and never was the saying that "Competition is the life of trade" (if I may be so disrespectful as to apply it to the medical teaching) better exemplified. Seeing their existence threatened by this invasion of their monopoly in medical teaching, the faculty got a hustle on them and the very next year they had 98, instead of 38, students, and the following year 135.

They also, among other changes as above mentioned, established the Chair of the Diseases of the Eye and Ear in 1894 and other chairs not considered at all until the new school had set the example.

Neither the new school, its innovation in the field of medical teaching, nor its teachers were regarded with much favor by the faculty of the Medical College of Virginia, although they in reality should have been hailed as the savior of the old school, which was dying of dry rot, and welcomed as friends, instead of being regarded as enemies.

However, those days are long since past, and the lion and the lamb laid down in amity years ago, and everybody now is friendly with everybody else.

Since 1903, I have been Professor of Ophthalmology, first in the University College of Medicine and in the Medical College of Virginia since the peace pact in 1913.

Dr. John Dunn was Professor of Otology and Rhinology during the life of the University College of Medicine and Professor of Otology since 1913. Dr. Clif Miller, Associate Professor of Diseases of the Throat and Nose; Dr. Wright, Associate Professor of Ophthalmology. Doctors Gill and Blackwell, Associates in Ophthalmology, have each year given lectures on selected subjects in ophthalmology.

In 1903, the University of Virginia also began the regular teaching of ophthalmology, otology, etc., with Dr. Hedges in the chair, which two years later was divided, Dr. Hedges continuing as Professor of Ophthalmology and Dr. Compton, Professor of Ear, Throat and Nose. I did not know that these had been made full professorships until I was so informed by Dr. Hedges in a letter of recent date.

A number of the specialists in the State who had no official connection with the Eye and Ear Infirmary were students at one or the other of the local medical schools and received their first instruction in Ophthalmology by attending the clinics of the institution.

I might mention Dr. Hunter McGuire of Winchester, president of our present organization, Dr. Garrett of Roanoke, Dr. Herbert of the same place, Dr. Jones of Newport News, Dr. DeJarnette of Fredericksburg, and probably others I have overlooked.

Others besides those who studied at our Virginia colleges, about 37 in number, and attended the Virginia clinics, have come into our towns from time to time to swell the number of specialists in this line in Virginia, so that we now have about 84 men confining their work to this specialty. Of these, 25 are in Richmond and 20 in Norfolk, something more than half the number in the State.

Whilst most of the men interested in this special line are busy, successful practitioners, very few of them have found time, or thought it worth while, to put their valuable experi-

ences in print and thereby give their colleagues the benefit of the knowledge they have accumulated.

I rarely miss a medical gathering which promises to give me help in meeting the problems that are constantly confronting us in practice, and I frequently find I have benefited as much on the outside as on the inside of the convention, from association and table-talks with members who say very little on the floor, some quiet and retiring fellow chockful of practical knowledge about his business that has to be extracted with a corkscrew.

I hope, however, as corkscrews will soon be obsolete, that the new association of the specialists of Virginia will be sufficient stimulus to make its members unbosom themselves, not only in table-talks, but on the floor at its semi-annual meetings for the mutual benefit of all. It is by organization that we can render the best service to the public and to each other and, without personal jealousy, work together for the advancement of our specialty in Virginia.

200 East Franklin Street.

DIABETES INSIPIDUS. WITH REPORT OF A PECULIAR CASE.*

By J. S. DAVIS, M. D., University, Va.

Diabetes Insipidus is defined by Dr. Osler as "A chronic affection characterized by the passage of large quantities of normal urine of low specific gravity". It was first distinguished by Willis in 1674 and is relatively rare. Most of the reports come from South America, where the climate is subtropical, and are described in the Spanish and Portugese languages with which I am not very familiar so that part of the accounts are inaccessible to me. All cases seem to be in white people. Polyuria from the physiological standpoint, according to Hewlett, may be due to: (1) An increase in renal circulation; (2) A watery composition of the blood; (3) Increased secretory activity of the kidneys. The last may come from an increased elimination through the glomeruli or interference with the resorption of fluid, which Ludwig claims should take place in the renal tubules; a veritable renal diarrhea. Some of the responsibility of the glomeruli has, however, been removed by recent investigators who regard the epithelium of the convoluted tubules as far the most important excretory organs. Polyuria may occur from drinking liquids, and during the removal of edemas, after fever, from certain drugs and salts, such as chloride of sodium, caffein, and digitalis. It is a well known episode of hysteria, and some nephritides, especially chronic interstitial forms, give polyuria, but the most curious instances come from lesions of the central nervous system. Punctures of the medulla oblongata by Bernard a century ago produced at one spot glycosuria, and a little above it a polyuria without sugar.

The characteristic symptoms of the condition we are to consider may come from a lesion of other portions of the brain; operations upon the hypophysis and injuries in its neighborhood have often been followed by polyuria, and much discussion has arisen as to whether this was due to nervous influences acting on the kidneys, to the liberation of an internal secretion from the pituitary, or the removal of some restraining influences on that organ. Extracts of the posterior lobe possess marked diuretic properties which may continue for some time.

Cushing transplanted the posterior lobe into an experimental animal and produced polyuria which ceased when this graft was removed. This observation supports the internal secretion theory rather than that of the direct stimulation of nerve paths. On the other hand, Beck and MacLean believe the diuresis due to underfunctioning of the pars intermedia. Anatomically, the anterior part is of alimentary origin and the isthmus and posterior part nervous. Their functions differ.

Brown, of London, reports experiments showing that total extirpation causes oliguria, but partial extirpation, especially of the posterior lobe, polyuria, of which he describes four forms, attributing all of them, however, to vaso-motor irritability.

Snell, Rountree, et als, think hyperactivity of the posterior lobe and pars intermedia the chief underlying factor in this disease, and that the anterior lobe may, if hyperactive, give rise to abnormal growth, but, if underactive, to infantilism or dystrophia adiposogenitalis. The gland, then, has some association with both saccharine and insipid diabetes, since disturbance of the posterior lobe increases diure-

*Read before the Southwestern Virginia Medical Society, at its meeting in Bristol, Va.-Tenn., September 20, 1920.

sis and, in some cases, affects the sugar tolerance too.

With this introduction, I will at once describe my experience with the disease and add some speculations, which I hope you will clarify, as to the nature and mechanism of this most obstinate affection. It is not common. I have only six cases to report in nine years and have accurate notes of only four of these.

The first case was met with in June 1909 in the person of a young, white, fireman, 27 years old, with a neurotic maternal family history. He was single and denied bad habits and infections. He had had measles, whooping cough, and malaria. Six months previously he had begun to feel nervous and his bowels moved frequently. This kept up for three months more when frequent micturition set in and the case was pronounced "Bright's" by his first medical adviser. No improvement occurring in three months more, he came to the University of Virginia Hospital to my service. His complaints then were headache, backache, and polyuria. He was extremely apathetic looking, had bad headaches, was sleepless, easily fatigued, and his thirst was insatiable. In bed he was restless, cerebration was slow, and his utterance hesitating, though answers were correct and there were no hallucinations, delusions, nor other evidences of a perverted mentality. His depression seemed to be due to his mental attitude to his condition. Physically, nothing was found except a slight exaggeration of his deep reflexes and numbness in the back of the head. His eyes were all right in every way; blood pressure was 125 m.m. systolic; hemoglobin 75 per cent; red cells were 4,532,000; white 5,200. He passed from 1,500 cc. to 16,000 cc. of urine of specific gravity 1001 to 1002, always from 100 to 500 cc. more than the water he took. He was given valerianate of zinc, grains 5, morning and night, and fluid extract ergot, drops 30, three times a day. He left the hospital three weeks later not improved and reported his condition unchanged on July 16th when he made an office visit. Two months afterwards I was grieved to hear that he had committed suicide in a fit of despondency over his trouble. No x-rays were taken of his skull, I am sorry to say, nor lumbar puncture done, but the syndrome suggests intracranial trouble.

My second case was presented in March, 1911, by an attorney 52 years old, of neurotic family history and with a tabetic brother. He himself was married and had two healthy children. He had had no serious illness and lost no weight. Venereal infection, alcohol, and tobacco were all denied. Before onset of polyuria, which was of six years' duration, he had suffered much with bitemporal headaches which gradually disappeared. His eye reflexes and movements and backgrounds were normal. His blood pressure was 110 m.m. systolic, diastolic 80 m.m. His blood color was 100 per cent. Physically and nervously he was all right. His only complaint was thirst and frequent urination. He passed four to six quarts of chemically normal urine varying in density from 1004 to 1008. He was given valerianate of zinc, 1 grain, three times a day and by May 21st a great improvement had occurred. The quantity of urine was reduced to two and one-quarter quarts and its density raised to 1020. He now complained chiefly of backache and constipation. These being relieved by appropriate measures, he continued about the same until he stopped the medication. On September 13th of that year he reported a relapse, but on resumption of the valerianate of zinc and amylene hydrate he promptly improved, and I presume has remained comfortable, as I have heard nothing further from him directly but know he is living and at his business.

The third case was seen in 1915 in a young clerk, 30 years of age. He was married with one child and a negative family history except that his mother had died of cancer. He had had acute nephritis in childhood and been unjustly suspected of tuberculosis at the age of 19. He denied venereal disease and alcohol to excess though he used a large amount of tobacco. Eighteen months previous to admission he had been taken with headache and polyuria for which he received medical treatment addressed to "blood pressure," which was just then beginning to be fashionable in his town. His pains were relieved but he continued to pass large quantities of urine, particularly at night. Pain in the back, indigestion, and recurring headache during the month before brought him to the University of Virginia Hospital. Physical examination was

negative but he was passing ten quarts of urine, was very thirsty, and drank much water. He perspired easily, was very nervous and irritable, felt "dopy," debilitated, and claimed to have lost his memory, was depressed, and had no appetite. His blood pressure was 115 m.m. systolic and 70 m.m diastolic. His leucocytes were 12,600 and of normal proportions. He passed from 5,000 to 10,000 cc. of urine whose density never exceeded 1005. Chloride test was applied positively. He was given for ten days large doses of valerianate of zinc (ten grains), three times a day, and sodium bromide at night. Meat and salt were excluded from his diet. Slight relief followed and he went away a week later and returned the following year still suffering with polyuria and nervousness but would not stay for further treatment. He is still alive but I have not learned anything definite about his condition.

The fourth case is even vaguer and almost valueless except as to the note on causation. The patient presented himself in the office only once and was a laborer, 32 years old, who became overheated in the field and laid down in a branch of water to cool himself, swallowing as much of the stream as his gullet would accommodate. He thus seemed to set up a piumbing arrangement which acted continuously, and was, at last account two weeks afterward, a persistent and perennial fountain with an output of 1002 specific gravity. This is interesting in view of the acute onset from an apparent overstrain of the urinary apparatus.

The fifth case was seen this past summer in consultation and the subject was a girl 18 years old. I had known her socially before as a very fat and awkward damsel. A year ago she commenced to have polyuria and headache together with insatiable thirst. It was a case of dystrophia adiposo-genitalis and has been markedly improved in everyway by administration of pituitary extract. The urine and thirst are both reduced and the disfiguring fat has largely disappeared. It looks as if the trouble were originally in the anterior lobe and extended backward. Her energies are almost normal but her happiness still depends on the mutual accessibility of a constantly replenished water pitcher and an unobstructed toilet.

My last case, which is now current and the one that inspired this subject, came under my charge on July 15th of this year. It was that of a young man, a civil engineer, 28 years old, married, and with one child. He complained chiefly of pain in his head, weakness, great thirst, and profuse urination. His family history was excellent, as well as his own with the exception of a severe case of typhoid in 1914 when he was in bed three months but made a good recovery. He had influenza in 1918 without complications, and a year later mumps with orchitis which left him with one painful and atrophic testicle. He has been subject to headaches something like the present ones but attributed them to his eyes. His appetite has been good even during the present illness and he has gained weight. His bowels are regular. Venereal history is entirely negative, nor does he use tobacco or alcohol. He has always had a nervous temperament and worries easily. His work was, however, congenial, though he had been accused of not liking it. Sensitiveness to criticism has been a marked feature. His present illness dates back to April 1st when he was taken suddenly with an attack of severe pain in the right temporal region. He had been languid for ten days before this but thought it due to overwork. He soon noticed double vision which persisted for some weeks but had disappeared when he came to me. He nevertheless, despite the diplopia, kept at work though he felt "dopy" and could not accomplish much. After a week of effort he quit work and consulted an oculist in Baltimore who told him he was run down and advised rest and glasses. He disobeyed and went back to work. His headache had now gone but he felt weak and nervous. His return to work coincided with a strike in his business and, together with others, he volunteered to do anything he could to help out. He found, however, he was unable physically or mentally to do anything properly and finally wound up by sitting still in his office all day. He could do routine work but could not make decisions. He now had some difficulty in walking and his legs felt numb, even in bed. He felt so nervous that he applied for leave, which he got, and was advised to consult a nervous disease specialist who told him he had had lethargic encephalitis. Ever since the oculist prescribed the glasses he had been passing large quantities of urine and drinking a great amount of

water. He was readily exhausted and much worried by his debility, so he threw up his job and wired the company that he was compelled to go home, whence he was brought to me, as stated. He feels worse during and after meals, though he does full justice to them. He complains that nobody understands him and he is particularly sensitive to the imputation that his trouble is imaginary, which some of his family have suggested. All work and exercise makes him worse and the pain is now constant in his temporal regions and across the forehead, though distinctly worse on the right side. Printed pages did not look the same to him as before, words were blurred, and he expresses the belief that it is due to a failure of the word picture to be carried to or impressed on his brain. He has the same sort of depression as the first case. These are the salient features of a much abridged account which he detailed at enormous length.

Photograph of Skull of Patient in Case VI.

Physically he was a depressed looking, fairly nourished, sallow skinned subject. His head was symmetrical and showed no scars. His eye movements, reflexes, and backgrounds were normal, though he claimed to have variable difficulty in fixing and holding objects in vision. His ears were normal and mouth and teeth all right. The lungs showed no abnormalities, nor did his heart save for a slight irritability on excitement and worry. His blood pressure varied from 100 systolic and 80 diastolic to 120 systolic and 90 diastolic, and his pulse from 70 to 96. His hemoglobin was 85% and his leucocytes 4,500 and of normal proportions. His abdomen was not distended, no masses nor tenderness were felt. Neither spleen nor kidneys were palpable and his liver was not enlarged. Patella reflexes were active. There was no clonus, ataxia, nor tremors. His Wassermann was negative on blood and spinal fluid. His urine varied in quantity from 5,000 cc. to 14,000 cc. of a very pale amber color and with a specific gravity of 1001 to 1010 without albumin or sugar or sediment; except on July 18th to 28th when he got daily doses of pituitrin, there was the smallest possible trace of albumin with elevation of blood pressure to 120 m. m. systolic. The chloride of sodium test was applied and increased the quantity of urine to 17,000 cc. I had no opportunity nor

facilities either to test the great tolerance for alcohol these subjects are said to show.

The x-ray picture of his skull accompanying shows the sphenoidal sinus as large and irregular in outline, the roof bulging up immediately in front of the sella turcica, thereby pushing its floor upward and slightly backward, the result being a very slender and ill-shaped fossa. After these findings pituitrin was given, one ampule once a day hypodermically, and five grains of the extract of the posterior lobe of the gland by mouth, three times a day besides. The urine promptly fell off from 14,000 to 5,000 cc. with very little increase of density; though Rees says this may be due to diminished absorption of water from the intestine which he claims is one of the main actions of this agent. The patient complained so bitterly of more blurring of his vision and mental confusion which he attributed to this medicine that he positively refused to take any more. Accordingly, strychnine, grains 1/20, were substituted, with bromide of sodium, grains 30, at night, until we could get for the latter amylene hydrate that had been effective in an earlier case. No relief was gotten, however, and the urine continued about 12,000 cc. Salt was removed from the diet and proteins reduced to a minimum without any appreciable effect. He never sweated. He remained until August 15th and returned to his home where the surroundings it was hoped would dispel his depression and injured feelings. On September 9th he was reported as unimproved and mentally fearing insanity. He returned to my care on September 11 in the same condition, passing from 10,000 to 14,000 cc. of urine every day. Lumbar puncture revealed a virtually normal cerebrospinal fluid under no extra pressure, with no increased globulin, and a cell count of six. For the first day after this procedure he felt much better and his urine was reduced to 7,000 cc., but 48 hours later he had so much headache and other discomforts that he claimed the reduction in urine was due to his failure to drink the usual amount of water, from 7 to 12 liters. This cephalgia is of Purdee's pituitary type and lends some further evidence to the idea of this location of the lesion. He excretes within 50 cc. of the amount of water ingested. On September 18th his output fell to 2,800 cc. after he drank 2,600 cc. of water, but the specific gravity was still 1001. As his headache got better his quantity increased to 3,700 cc. and he drank 2,600 cc. of water. This was the low water mark, and thereafter up to September 27, 1920, the quantity of urine gradually increased until the amount of 7,900 cc. was reached. All during this time he was nervous and irritable. As his head got better he transferred his complaints to his left atrophic testicle where he professed to feel crawling and drawing sensations which aggravated his already irritable sexuality. I applied salicylate of methyl locally and almost alienated him by the terrible burning it set up. There was great increase of sexual excitement which had been observed occasionally before and which may have some pituitary reference. His chlorides continued low and his specific gravity also, barely 1.6 grams of chloride per liter were excreted. Blood urea was normal. On September 25th valerianate of zinc was increased to two grains three times a day and codein sulphate, one-quarter, had to be used to supplement his nightly bromides. On reassurance by a surgeon that his testicle could not be responsible for his discomfort, he seemed to take one of his occasional braces, was better and slept without medication. I regret that he would not go on with the pituitary treatment originally but I wanted x-rays applied to his skull from various angles in a vague effort to reach the hypophysis. This has been recently recommended despite Rees' ideas as to the mode of action of pituitary substances. His testicular troubles now dominated the scene and vocabulary is exhausted in describing his local agonies. X-rays gave a temporary relief which he reluctantly admits. His whole attitude was fear of something worse rather than hope of something better—the hypochondriac type of neurasthenia.

Diagnosis in this case seems to be certain and I shall briefly discuss the nature of the condition. Such sufferers usually drink large quantities of water, so the question naturally arises as to whether the condition may not be one primarily of polydipsia with a secondary polyuria. Both can occur in man, but the latter is true diabetes insipidus. The distinction is not always easy to make but is based mainly on the effects of forced restriction of water on the urinary composition. In primary polydipsia this procedure will result in a more concentrated urine which approaches normal in quantity and density. In the true form, however, this will have nothing like so marked

an effect. It was tried in this case with the most trivial results at first and afterward with none at all, and caused too great suffering to be persisted in. There was more effect after the lumbar puncture, but the headache he had then caused him to neglect the pangs of thirst and in that way probably reduced the quantity but did not raise the density. The most characteristic feature of the disease is the fact that the concentration remains low despite measures that ordinarily raise it. Extra salt and meat would have this effect in normal persons but not in these cases. No sweating was observed in this case, though it occurred in the first one. This may be due to the drying out of the body from excessive urination, but some think it may be co-ordinate with, or possibly primary to, polyuria. In one case (girl of 8) the 24 hour quantity of urine surpassed the weight of the body.

The exact mechanism is still under discussion. The oldest expression is that of Meyer that it is an essential renal inability to secrete a concentrated urine, and, in consequence of this, a large quantity of liquids is needed to carry away in dilute solution the nitrogen and chlorides that take this avenue of escape. Forschbach and Webber, on the other hand, regard the condition as essentially due to a primary increase in the output of water. Diuresis is produced with abnormal ease and the low density is a secondary manifestation. It is a relative rather than an absolute inability to concentrate the urine. All agree that the primary cause does not lie in the kidneys. Pathological examinations there are negative and no definite association with other renal diseases has been observed.

Opinion has now largely turned to the central nervous system as the original situation of the trouble. Reference was made at the beginning to the experimental puncture of the medulla oblongata producing this syndrome; this kind of polyuria is associated with normal or increased sodium chloride concentration which differs essentially from human diabetes insipidus. Oblongata lesions are not found in these cases at autopsy. On the contrary, many genuine examples have been recently reported associated with diseases of the hypophysis, especially its isthmus and posterior lobe. Cerebral syphilis involving the base of the brain and the meninges there has, though, been held responsible for it and a large number of the cases have been shown to be due to it. It is the most remediable form, and was searched for in my case eagerly but vainly. It is the usual factor in children, in whom Cowie and Christian have each reported a remarkable case involving the hypophysis. The other cases seem to be due to tumors, injuries such as bullet wounds, etc., of this region. Matthews produced a long continued polyuria by inserting a foreign body into the region of the posterior lobe. Since this part of the gland contains a diuretic substance, the hypothesis seems justified, according to Hewlett, that some cases, at least, of diabetes insipidus are due to an excessive escape of this material into the circulation, but whether all cases are so caused is far from proven. On the other hand, Motzveldt claims that this secretion has a definite antidiuretic action, particularly in cases of polyuria. This is more consistent with the beneficial effects of pituitrin administration now reported. It is striking that some infectious disease (lues in half the cases) often precedes the trouble. In my last case, mumps, influenza, and possibly lethargic encephalitis, striking the base of the brain, might all be concerned. In the *Journal A. M. A.*, of September 18th, an article is reported from Paris describing a case of this sleeping sickness with polyuria, but it is the only reference I have been able to find. Measles and scarlatina, too, have been observed as antecedents. Males are much more liable than females, five to one in my series, and adults than either extreme of life. No cases in colored people have been reported.

An anatomical diagnosis is hard to make, for the pituitary fossa is subject to many normal variations in size and outline (Hever), so conclusions as to its diseases from x-ray pictures alone are difficult and unreliable. Many apparently very abnormal ones have no specific symptoms. In my case, it looks as if the sphenoid sinus was distended and pushed up the hypophysis. The effect of pituitrin administration was injurious rather than beneficial and in so far incriminates the gland and substantiates the theory of its diuretic power. Such inconsistencies are not fatal, as in one case the gland may be irritated and in another destroyed. The diplopia and ocular symptoms, too, suggest this locality for the lesion. Timme regards some of these cases as examples of his pituitary glandular syndrome, a thymus adrenal pituitary combination whose main char-

acteristics are easy fatiguability, low blood pressure, a peculiar temporal headache, abnormalities of growth, and sexuality, with depression and somnolence, "maladjustment of endocrinous interactivity." According to him, many persons show atypical forms of this syndrome, as I believe others have noted already, and relief is accomplished, sometimes at least, spontaneously, if the sella turcica can be made to accommodate a hyperactive and a hyperplastic hypophysis. This is presumably done by erosion of its bony capsule. If this is impossible, various irritative symptoms, such as epilepsies, etc., may arise in which pituitary extracts may fill a rational indication.

Summing up, the preponderance of evidence is in favor of dyspituitarism being in some measure responsible for diabetes insipidus, but it is not possible to say whether it is an over or under functioning of the gland. Perhaps it may be either, under different circumstances, and according to the part affected. The headaches, eye symptoms, disturbed sexuality, and x-ray findings in my last case certainly suggest this connection. Spontaneous recovery is occasionally observed, though Elsner regards it as absolutely incurable. There is a large nervous element for which bromides and valerianate of zinc are beneficial, as in my first case, and slightly so in my last. Pituitary extracts help others, though authorities differ sharply as to whether the extracts of the whole gland or of the posterior lobe by mouth, or pituitrin hypodermically, is better. Lumbar puncture cured one case but did not do so much for mine, at least yet awhile. Relapses occur and it is doubtful, except in syphilitic forms, if a final restoration is ever attained. Even in the more favorable cases, medication and hygiene will have to be kept up carefully and indefinitely.

SOME CONSIDERATIONS UPON RETRO-BULBAR NEURITIS.*

By HIRAM WOODS, M. D., Baltimore, Md.

SUMMARY.

1. Retro-bulbar neuritis essentially a diagnosis by exclusion.

2. The scotomata—position depends on nerve fibers involved. Shifting tendency.

3. Search for constitutional cause.
   A. Wassermann by blood and spinal fluid examinations.
   B. Sugar, blood coefficient.
   C. Dental origin.
   D. Sinusitis.

4. Terminology.

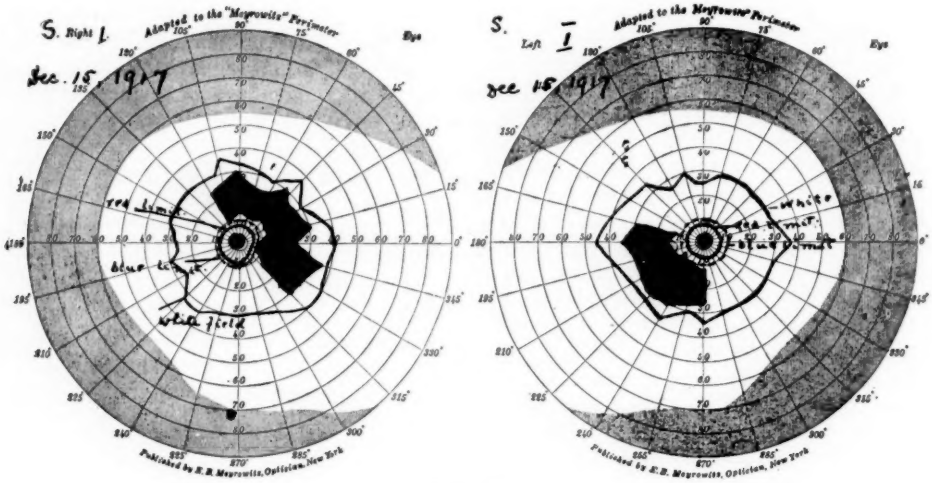
Within the last few years, literature has contained numerous articles on ocular neuropathies. While many are of unquestionable value, it seems to me that certain phases have been ignored and that there has been undue confusion in terminology. This paper is a plea for a somewhat broader consideration in the diagnosis of these ocular-neuropathies and uniformity in the nomenclature employed. The features of retro-bulbar neuritis to which I want to call attention are the scotomata, etiology, and importance of a correct and consistent terminology.

Regarding the scotomata, there are, of course, certain of them which are universally recognized. The red scotoma of tobacco or alcohol amblyopia is an example. But it must be remembered that any part of the nerve may be affected and so the scotoma may exist in any part of the field. It may be negative; it may cause only a sense of blurred unsatisfactory vision, and even this may at times pass off and the eye seem normal. It is in just this class of indefinite cases that careful perimetry is most needed. Edward Jackson calls attention to this in his textbook. Out of quite a number of cases in which the perimeter has furnished explanation, I present the following.

In 1911 I operated on the left eye of a man, 42 years old, for chronic glaucoma. In spite of a satisfactory iridectomy, atrophy advanced to blindness. Since then I have had him under regular observation in fear of glaucoma in the right eye. Central vision is, and always has been, normal. The limits of the field are very little contracted—not over five degrees. Hypertension was never discovered by digital test before I used the tonometer, nor have I found it with this instrument. He was kept on a miotic as a safeguard until the past two years when I tried going without it. He has lost nothing. I do not believe he has ever had glaucoma in the right eye. However, he has several times come to see me for what he calls a "funny thing" in his eye. He once discovered

*Read by invitation, February 3, 1921, before the Virginia Society of Oto-Laryngology and Ophthalmoogy, in Richmond.

a blurred spot in the lower field. With the perimeter, in about the place he described, I found a scotoma 20° to 30° directly down. I had him put through everything but a lumbar puncture with negative results save one; a proptosis of the stomach. He suffers, from time to time, from colon impaction and presents at such times the picture of what is called intestinal stasis. He insists that it is during these attacks of gastro-intestinal trouble that the "funny thing" occurs in the eye. The man is not imaginative. Though I have looked for it, I have never found the blind spot unless he had been through one of these attacks. While we are sure that various forms of infection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Dec. 15, 1917
Eye
Published by E. B. Meyrowitz, Optician, New York
S. Left 1
Adapted to the Meyrowitz Perimeter
Dec 15, 1917
Eye
Published by E. B. Meyrowitz, Optician, New York

Figure I.

can produce functional trouble with the optic nerve, we do not feel as sure as we used to about intestinal disorders. Whatever the cause, a recurrent, transient peripheral, positive scotoma reappears and fades in about the same place under the same circumstances. I do not know how else to classify this case save as toxic retro-bulbar neuritis. I present it as an illustration of field change capable of causing ocular discomfort and which might be easily missed; not with the view of suggesting a discussion on intestinal auto-intoxication. I am convinced that search for these queerly placed blind spots will often aid in solving a very troublesome class of cases.

A second feature of the scotoma in retro-bulbar neuritis is variation in position and extent. A woman, 56 years of age, unmarried and devoting most of her time to charity work, was seen on the 6th of November, 1919. Vision in left eye was blurred. The right eye was free from trouble throughout my observation. The affected eye had 20/200 central vision. The perimeter showed normal limits and no scotoma; but the campimeter gave a dim area for about 5° from the fovea into the nasal field. Three days later central vision had cleared to 20/30. This looked like hysteria, but she had developed a relative scotoma in the nasal field for colors. The upper portion of this blind spot persisted for nearly three months. It varied from blindness for form and color to a red scotoma. I could not reconcile hysteria with this persistent and consistent red scotoma, and believed I was dealing with a retro-bulbar neuritis involving a few perifoveal fibers. Every effort was made to ascertain the cause. Sinuses were negative. So were blood and neurological examinations. She was put on the treatment to which we usually resort when we do not know what else to use, mercury and KI. By March, 1920, she was well and still is. Probably the cause was a toxaemia which we could not find.

A second patient was a young man seen in October, 1917. Shortly after entering the naval service he developed irritable eyes, pain and defective vision. In both eyes there was, with correction of myopic refraction, 20/30 vision. A diagnosis of ciliary spasm had been made at one of the naval hospitals. At first I

saw the man only occasionally. He was discharged from the service in December. The eyes were watery, subject to recurrent hyperaemia, with spasms of the lids on examination; ment of the temporal field of each eye. I had the man under constant observation for nearly two months. During that time he was subjected to every possible examination and all

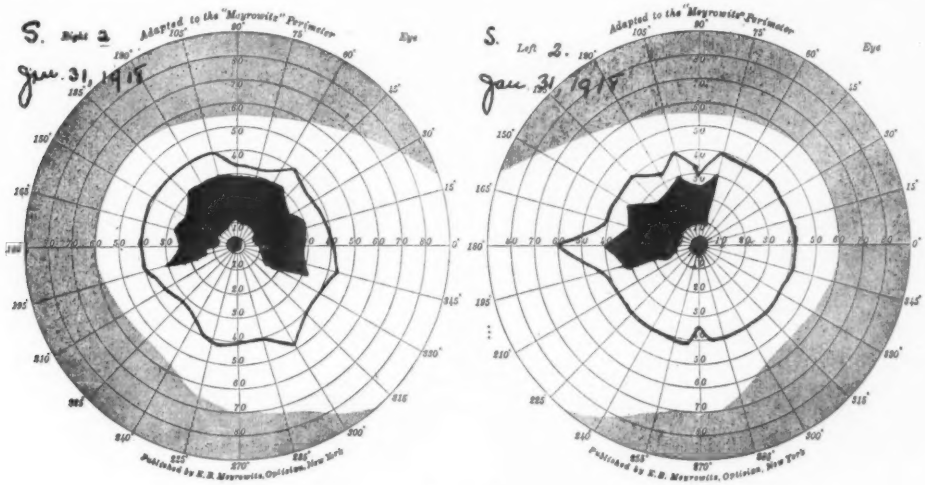


Figure II.

fundi and media negative. Vision was 20/50. Fields are depicted in Figure 1. They show concentric contraction for form and color with large paracentral scotomata in each eye. This was reported from the naval hospital as an were returned negative. The persistent scotoma in the temporal fields led me to suspect pituitary disease, but I could get nobody to agree with me. Finally, because everything seemed negative, Dr. Crowe suggested exploration of

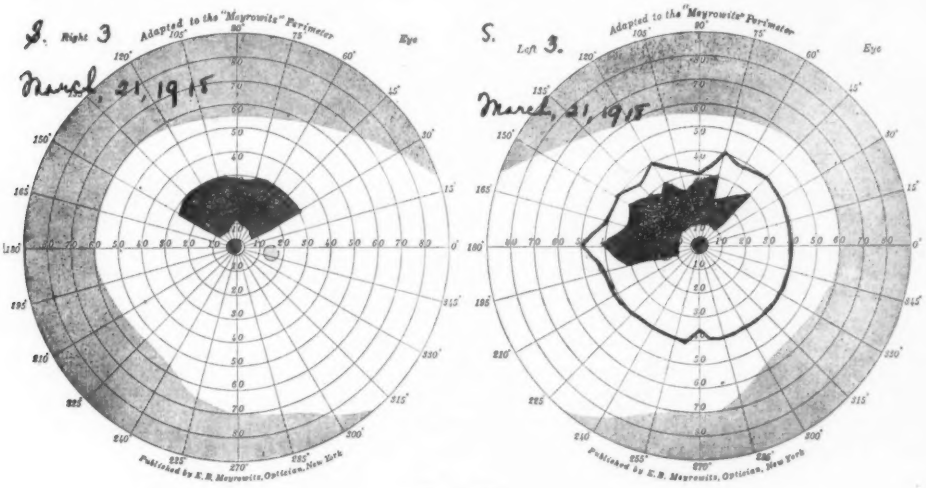
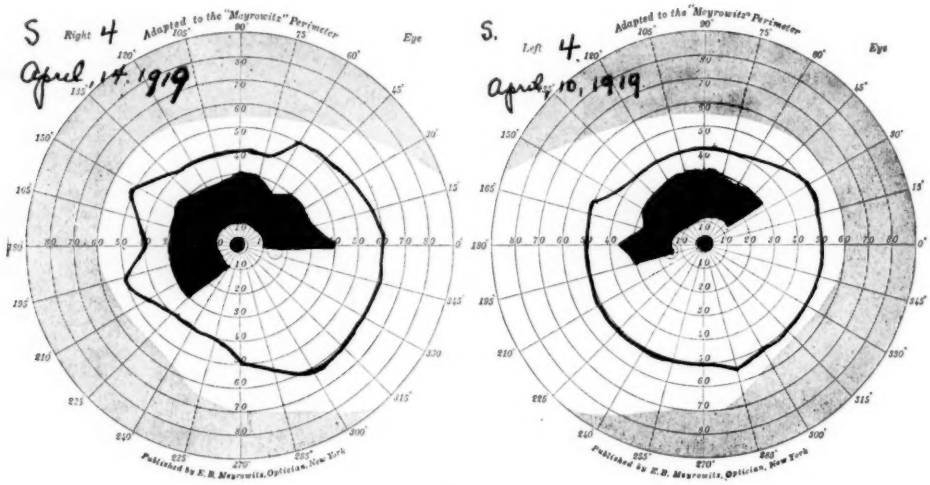


Figure III.

"enlargement of the normal blind spot." From December to March the scotomata varied in extent as depicted in Charts 2 and 3. However, they always preserved one thing—an involve- the sinuses, to which I assented only because the work was to be done by so skillful an operator. However, the operation was declined. The condition when last seen, April. 1919. (one

year after he was under observation) was: eyes free from irritation; central vision 20/20 and fields as in Figure 4. A letter from his father a few weeks ago stated that his son had been steadily improving without treatment and was doing his work; apparently a case of chronic retro-bulbar neuritis, cause unknown.

I am purposely omitting some well known forms of scotoma. These under discussion seem, however, to possess definite characteristics. Occurring in eyes without visible lesion, they tend to recover, specially if we can find and remove some source of toxaemia. Again, they are practically always most marked for red. Blindness for red persists after that for white and blue have cleared. This fixes the lesion in the nerve. In a few cases I have seen blue scotoma predominate. The meaning of this is, that for the time being it is the retinal cells which are affected. The picture is one of some toxic influence acting on the optic nerve or retina. As a rule the scotomata are negative. They will be found only, if looked for, in apparently symptomless eyes, unless we regard stubborn asthenopia as a possible symptom of optic nerve trouble.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April, 14. 1919
Adapted to the "Meyrowitz" Perimeter
Eye
Published by E. B. Meyrowitz, Optician, New York
S. Left 4.
April 10, 1919
Adapted to the "Meyrowitz" Perimeter
Eye
Published by E. B. Meyrowitz, Optician, New York

Figure IV.

A word about the course of retro-bulbar neuritis and search for its cause. Starting with some sort of visual defect and without ophthalmoscopic lesion, after a while the papilla is apt to show atrophy. If the foveal region is affected, there is the typical atrophy of the lower temporal sector. If the nerve is overwhelmed, as in wood alcohol poison or occasionally in endogenous infections, complete atrophy ensues. The ascertained cause, when it is ascertained, is toxic, and the trouble is usually described as "toxic amblyopia." Sometimes the toxic agent is introduced from without; but extraneous causes can usually be found and eliminated. In looking for endogenous causes we should remember that the eye is part of the nervous system. The Wassermann test, as usually done, is a blood examination. I have seen several cases—three recently—in which blood Wassermann was negative, while the spinal fluid test was positive. One was a case, similar to those under consideration, with lowered central vision and an isolated, negative, peripheral scotoma. The second was a paralysis of the externus with a low grade of descending neuritis. Both got well under treatment suggested by lumbar puncture. In the first, serious consideration was given to exploratory sinus operation based on negative findings elsewhere. The third was a case of early tabetic atrophy.

Dental infection must be borne in mind. However, I have seen but one case in which I thought it the cause of retro-bulbar optic neuritis. There were transient scotomata which have not recurred since the extraction of infected teeth. It is too soon to speak definitely. The case is still under observation.

Another important line of investigation is the blood coefficient for sugar. I have seen

cases of irritable accommodation and defective sight accompanied by a high sugar coefficient where glycosuria had never been suspected. Finally, we must be thorough. Last fall, I saw a patient with early atrophy, reduced central vision (20/70), central color scotoma and good field limits. She had no less than ten pairs of glasses. Her fields had never been taken nor had she had a neurological examination. The association of central color scotoma and lost abdominal reflexes gave the diagnosis.

Lately, stress has been laid upon acute and chronic sinusitis as a cause of retro-bulbar or descending neuritis. I want to give in detail, and largely from memory, the one case I have ever seen in which a nasal, or paranasal cause of blindness seemed clear. The ophthalmoscopic appearances, judging from literature, vary from normal to high grade of optic papillitis. I remember the case vividly because it was my first experience with retro-bulbar neuritis in private practice. A young man had taken a long bicycle ride on a summer afternoon. Reaching his country home, overheated, he fell asleep on the porch. He woke in an hour or so with a chill. The next day he had a coryza, headache and, toward afternoon, found his vision blurred. Two days later I saw him. He saw so poorly that he was led into the office. I could find nothing in the eye to account for the blindness; nor could more experienced observers. We then had had cocaine about two years and I knew it would shrink engorged mucous membranes. The man was put to bed, purged, given potassium iodide, and a cocaine solution was applied to the turbinals with a liberality I would not dream of now; at least, not without having nightmare. In three days he was well. A cure or a spontaneous recovery, which? I thought the former until recent years, but now I am not sure. I had not then schooled myself in the use of the perimeter. I had seen an old McHardy instrument, but it was never used. However, this man gave a pretty good description of central scotoma. My reason for using cocaine was to enable him to breath more easily. I had not the slightest conception of draining the sinuses; did not know they ever needed draining or that oedematous nasal tissue could block them and produce increased pressure on anything. I believe that this was a case of blindness of nasal origin; and if, with the history of sudden onset, the intra-nasal structures presented in a case today what this patient's presented, I am inclined to think I should want his sinuses drained by operation if there was no prompt improvement after shrinking.

Dr. Bordley presented his large experience in his paper before A. M. A. Section in April, 1920. I have no doubt of the power of infectious foci to affect neighboring or even remote structures. Sinus infection should, so far as I know, be admitted as a possible source of inflammatory or functional optic nerve disorder. When, with either of these conditions there are clinical or roentgen ray evidences of sinus involvement and no other obvious etiology, there should be no hesitancy about exploration, provided it is done by a skillful operator who understands the dangers. But there is another class of cases now under consideration in medical literature: I mean retro- or intra-ocular neuritis with no clinical evidence of sinus disease. They are operated upon because, in the absence of evidence of other cause, it is thought best to "explore" the sinuses. There are considerations which should make us hesitate. One is, that there are certain intra-ocular nerve changes, easily mistaken for inflammatory processes but which really point farther back than the sinuses to the "silent brain" areas. Another is the natural tendency for uncomplicated retro-bulbar neuritis to clear up. By "uncomplicated" I mean the presence of nothing in the nervous system or blood apt to cause organic or functional defect.

I had under my care two years ago a man with central scotoma in each eye. Nothing abnormal was found, save that in lumbar puncture the fluid was thought to come out with undue force. However, the findings were negative. His sinuses were free from symptoms and negative to the x-rays but were "explored" after every other examination had proved negative. Nothing was found and not a particle of good followed; but, under persistent mercurial and iodid treatment, he has gotten well. This treatment was ordered because I suspected an old specific trouble and when there is a clinical history definitely suggestive of this, a negative Wassermann has little influence with me. A letter from the patient under date of January 26, 1921, says, "Two weeks ago I saw Dr. F. D. Phinney of Cincinnati and his chart tests showed both left and right eye normal. I find from actual observation that my right eye is practically as good as it ever was, but

the left eye is a trifle dim at a distance." It may be said that this is a case of delayed recovery and that the sinus operation affected cure. It is very hard for me to accept this explanation, specially as the so-called hyperplastic sinusitis on which it depends has such an indefinite pathology as rarifying ostitis and subsequent hyperplasia of sinus mucous membranes.

A final reason for operative conservation is the large number of men who have gone into special practice without sufficient knowledge of eye and brain pathology. In a way, we, who appreciate this need, are not responsible for others' ignorance. In another way we are. We must not make a grave diagnosis, solely on exclusion, look like an easy thing. I am not criticising; I am merely giving voice to a warning based on what I think is a lot of indiscriminate operating without the knowledge which should precede it.

I want to use four recently published papers in studying the importance of correct and adequate terminology. A number of articles have, of late, appeared concerning the relation of diseases of the accessory sinuses to defects in vision. Two appeared in the *Journal of the A. M. A.*, one by Dr. Leon White (May 29, 1920), the other by Dr. Harvey Cushing (July 24, 1920). Dr. White's paper is written from the standpoint of the rhinologist. It contains a table of ocular diagnoses. Of 25 cases, 13 are classified as "retro-bulbar neuritis" of various kinds: acute 7; chronic 3; atrophic 2; not specified 1. Seven cases are noted as "neuritis"—2 without qualification; 2 acute; 2 chronic; one axial. Three cases are noted as "papillitis"—five eyes being considered. Finally, there are one case each of neuro-retinitis and neuro-retinochoroiditis.

Again in the *Journal* of September 18th, there are papers from Dr. Edward C. Ellett and Dr. James Bordley, Jr. In a case which recovered vision after sinus operation, Dr. Ellett describes the fundal condition as:—"Marked papillitis with swelling of three diopters and a few small hemorrhages at the edge of the disc." In a second case, of two months' standing which received no visual benefit from sinus operation, the fundal changes were "nerve head swollen two diopters and light in color." This comes pretty close to what is called "choked disc." In addition, the patient had cerebral symptoms. In the same number of the *Journal* there is Dr. Bordley's paper to which I have already alluded. Regarding the ophthalmoscopic changes in optic neuritis of sinus origin he says: "The ophthalmoscopic picture varied from a normal nerve head to profound choked disc. In eight or nine cases the variation was within normal limits; four patients had clearly defined choked discs; the balance varied from a mild venous engorgement to the typical picture seen in toxic amblyopia. I feel that the ophthalmoscopic picture is only of suggestive value."

Finally, Dr. Cushing's paper has for its theme the mechanical development of choked disc. He adds: "When retro-bulbar neuritis is said to be accompanied by two or three diopters of swelling, we are certainly dealing with something which a hyperplasia of the mucous membrane lining the accessory sinuses is not capable of producing."

I have grouped these designations because they come from capable observers. To Dr. Cushing, association of retro-bulbar neuritis with a disc elevation of two or three diopters means choked disc. Believing, as he does, and as most of us do, in the mechanical production of this lesion, and basing his conclusion on anatomical conditions, he thinks it "unbelievable" that a choked disc can be produced by anything not intracranial. He would regard a choked disc as eliminating a cause located as far forward as the nose. It would have *diagnostic* value. Apparently Dr. Bordley would attach no such meaning to it; he would regard what he terms in his paper a "clearly defined choked disc," as a logical result of sinus disease. We are brought back to the question, should the expression "choked disc" be used for anything except papilloedema from increased intracranial pressure? That, I believe, is its ordinarily accepted meaning. The question is of more than academic interest, for on its interpretation depends the surgical procedure to be followed.

The seemingly interchangeable terms, neuritis, optic neuritis, descending neuritis, papillitis, hyperaemia of the disc and blurring of the neuro-retinal margin (pseudo-neuritis), demand a word. All save the last mean inflammatory processes. This (pseudo-neuritis) is consistent with normal eyes and uncorrected refraction error. As de Schweinitz points out in his text book, the term "papillitis" was sug-

gested by Leber "to avoid confusion of names," and, if clearly understood as applying only to inflammatory conditions, it "is suitable." The essential point is that it *does* specify *only* an "inflammatory condition" of the nerve and excludes choked disc; so do its subsidiary divisions. Neuritis is inadequate for differential diagnosis. Disc "hyperaemia" usually means uveal, not nerve trouble. The need of care in terminology is illustrated by the morbid anatomy of descending neuritis and choked disc.

I shall try only to summarize what Fuchs says. To begin with ophthalmoscopic appearance, "The two conditions are not so widely separated as theory demands, since numerous transition forms occur between choked disc and descending neuritis." As regards inflammation of the optic nerve, Fuchs says it starts from its connective tissue portion—the sheath and connective tissue septa. There is a dropsical condition in the sheaths, but, in addition, an inflammatory process involving the striae of connective tissue in the nerve trunks. The nerve fibers play a passive part and are eventually strangled by pressure from connective tissue growth. On the other hand, in choked disc "inflammatory symptoms are limited to the papilla while the trunk of the optic nerve back of the lamina cribrosa is fairly normal. The feature is that the papilla is found to be greatly swollen by an accumulation of oedematous liquid, so that it projects like a mushroom into the interior of the eye." I hardly think it necessary to follow in detail the obvious changes in the neuro-retinal vessels. To my mind, the essentials are that in both choked disc and descending neuritis there is an accumulation of fluid in the intervaginal space, but in papillitis, to use the generic term, the origin is inflammatory, while in choked disc, it is mechanical. Farther developments are typical of the cause. While, as stated by Fuchs, and as proven by universal experience, the visible neuro-retinal changes in transition cases may mislead the most careful observer, there are, in typical cases, certain guides. When observed changes are chiefly in the papilla, as in one of Ellett's cases, when developments have been slow, or when one sees, as he often can if hemorrhages are not in the way, the peculiar climbing of vessels up to the top of the swollen nerve head, the diagnosis of choked disc is imperative. So is acceptance of what choked disc means as to location of the lesion:—i. e., if its old meaning is to be retained.

It would be hard to find together two more instructive cases than those of Ellett's. They are pictures of success and failure from exploratory operations. Both cases showed pus in the sinuses on nasal exploration, not diagnosed before. In one, the sequel seemed to prove this pus causative of eye trouble. In the other it was not. In this latter, there was clearly choked disc, not inflammatory oedema or descending neuritis. The rhinologist will have his successes in inflammatory infections, descending neuritis with swelling of the neuro-retinal tissues, and failures when he is dealing with choked disc more or less complicated by secondary retinal changes, provided choked disc means what Cushing claims. Right conception of the problem will be better obtained if we learn and keep in mind underlying pathology and talk in the same terms. Retro-bulbar neuritis has its place and limitations. It should be qualified or dropped at the right time and that is, when a fundal lesion becomes visible. Papillitis is a generic term and needs, if it is possible to give, specification of the nature of the neuritis. Choked disc is not admissible when the weight of evidence is in favor of an inflammatory cause. It is, when with swelling of the disc, neither history, symptoms nor appearances suggest inflammatory origin. If, in addition, there be intracranial symptoms, the probability of choked disc from increased intracranial pressure becomes almost a certainty. There is abundant room for error in judgment between these two conditions, and only careful study of everything in a case can enable us to avoid mistakes. But first, we will be helped if we get names right and keep their meaning constantly in mind.

842 Park Avenue.

REPORT OF A CASE OF HORSESHOE KIDNEY.*

By ROBERT C. BRYAN, M. D., F. A. C. S., Richmond, Va.

Kuester states that horseshoe kidney occurs once in eleven hundred times. It is, therefore, not so infrequent as one may think.

Fusion of the lower poles of the kidney is due to a union of their metanephric substances

*Read at the monthly meeting of the Richmond Surgical Society, February 1, 1921.

about the seventh or eighth week in early uterine life. More rarely, there is a union of the upper poles, in which case the horseshoe kidney will be found situated higher in the abdominal cavity as it occurs later than the seventh or eighth week, after the kidney has risen above the promontory of the sacrum. On account of the anterior position of the pelvis of the foetal kidney, and failure of rotation to the normal, the pelves present more anteriorly in the fused state. There is, however, at no time a union of these pelves; they are independent structures since they are always well developed before the parenchymal junction occurs. The course, excursion and entrance of the ureters into the bladder follows the normal plan. Seldom are the ureters inserted into the same side of the bladder, or into the urethra.

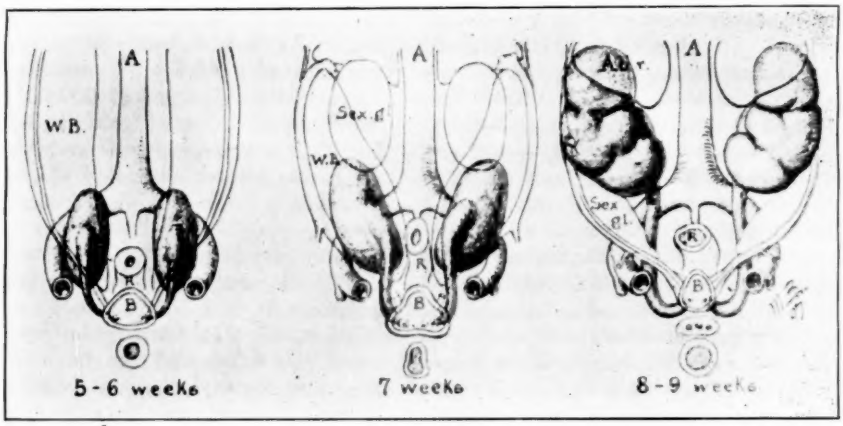

Fig. 1. Note the antero-posterior position of the pelvis and the proximity of the lower poles. It is at this time of intrauterine life that the kidneys become fused.

There is no reason why a fused or horseshoe kidney should not function normally, but any pathological diversion may arise in horseshoe kidneys, particularly hydronephrosis, which is due to an aberrant artery from the iliac or abdominal aorta; this artery refused to give up its nutrient right in the embryological ascent of the kidney and holds the organ at the foetal antero-posterior angle, which is a pathologic position and at variance with the normal site designed by nature in the paravertebral recesses. These arterial branches usually enter the substance of the kidney behind the pelvis, the main trunk coming from the aorta below the mesenteric arteries and several very small twigs besides running to the upper and lower poles of the kidney. It has been stated that the fusion of kidneys usually occurs below the level of the aortic bifurcation. In our case it is noted that the union was considerably higher. Kelly and Burnham state that the union may be of three degrees:—

1. The connection between the organs may be a thin fibrous band without any trace of parenchyma.

2. The bridge may be broad and consist of cortex alone, there being no medullary substance. This is the most frequent form of horseshoe kidney.

3. The fused kidney may be of unequal size, the bridge being so thick as to make it seem a portion of the smaller kidney. In this instance, the horseshoe kidney presents a symmetrical appearance on account of the distortion of the ureters and vessels associated with such forms.

There have been cases reported in which there was an independent ureter coming from this bridge and opening in the bladder. Such cases are extremely rare.

Diagnosis: Diagnosis of horseshoe kidney is most difficult. Occasionally the organ lies upon the abdominal aorta so that the pulsation is readily transmitted to the hand; the outline of the kidney may be felt through thin abdomens, or, under anesthesia, definitely mapped out. Fused kidneys enjoy no normal respiratory excursion; they are bound down by extraperitoneal fascial bands, which at times restrict the vascularization and functioning of the pelvis. Pyelograms show a caudal and mesial

displacement, with antero-posterior location of the pelvis. Cystoscopic examinations may show a supernumerary ureteral opening. Insertion

Fig. 2. Pyelogram of the stained left renal pelvis. Note the horizontal shadow at the lower pole of the pelvis.

of the ureteral catheter allows the catheter to ascend but a short distance, to or about the promontory of the sacrum, and an x-ray of the

Fig. 3. Lateral view of the stained pelvis of the left kidney.

leaded catheter in situ shows mesial position of the ureter.

Fused kidneys in the bony pelvis have given rise to great complications in labor, and should, therefore, be an indication for the suprapubic removal of the child.

Attention has been called not infrequently to the susceptibility of the aberrant kidneys to disease, tuberculosis and malignant degeneration, which may be attributed in a measure to the irregular arterial supply and the consequent venous stagnation from the anterior position of the pelvis.

TREATMENT: The treatment resolves itself into that treatment which obtains in the same pathological state of the normal kidney, whether it be stone, T. B., hydronephrosis, or purulent conditions. But the twin organ should be thoroughly investigated by careful urinalysis, renal efficiency and pyelogram, to determine

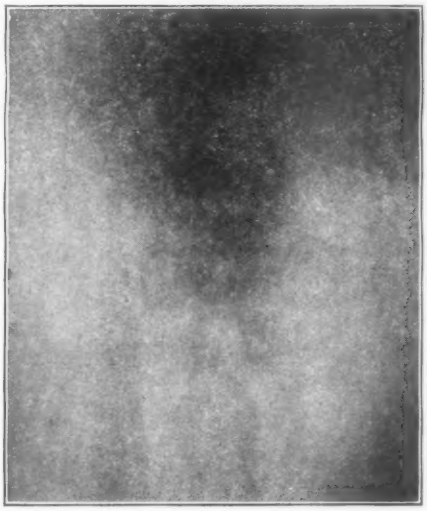

Fig. 4. Pyelogram of the normal right kidney. Note the branching calyces and mesial situation.

its functionating capacity before surgical intervention is attempted upon its offending fellow. There are many cases in literature in which one member of the fused kidney has been resected, or stones removed as would be done in the non-united kidney.

The writer would report the following case:

G. M., colored, age 35, male, single, factory hand, referred by Dr. Ross.

October 7, 1920. *Cystoscopic examination:* Mucosa injected, that around left ureteral os very much so. Both ureters catheterized, no obstruction. Right urine showed few pus cells, no bacteria. Left urine showed pus cells 3 plus, colon bacilli 4 plus.

Phthalein test: Appearance time right kidney 4 minutes, only trace from left kidney in 15 minutes. Amount from right kidney for 15 minutes 27½%, amount from left kidney 4% in 15 minutes.

X-ray for stone negative.

October 15. *Cystoscopic examination.* Microscopical examination of separate urine and phthalein test practically same except no appearance from left kidney in 20 minutes.

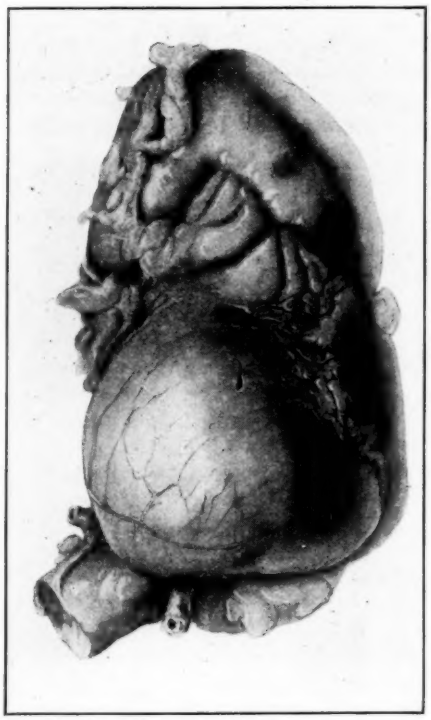

Fig. 5. Actual drawing of removed kidney with the bridge of renal tissue projecting downward and inward.

Fig. 6. The kidney laid open. The flattened calyces are evident as is the normal bridge of renal tissue.

November 18. Enters Virginia Hospital.

November 19. *Examination:*

Chief complaint: Kidney and gonorrhoeal trouble.

Present illness: First had gonorrhoea when 19 years old and procured medicine which stopped the disease and never had any trouble with it again until 1917 when the patient was taken with "flu" and stayed in bed three months. When he got up his kidneys started hurting him and about two weeks after kidneys started to hurting him blood would come from him when he finished urinating. The patient states that only his left kidney has ever hurt him, and that, ever since having the "flu," there has been a constant running of pus from the penis. Immediately after seeing blood in the urine, the patient went to see Dr. Ross and Dr. Ross treated him for a week before the blood stopped, but the pus has never stopped, although patient has been taking treatment all the time. The pus is more abundant in the evening and some weeks there is more than at other weeks. The patient has taken medicine and injections regularly ever since first seeing the pus but has never been able to cure it up. In October, 1919, Dr. Ross made a cystoscopic examination and renal function test on patient and sent him to this hospital for pyonephrosis of the left kidney and to have the kidney removed, but, on account of the patient having a Wassermann 4 plus, the patient was not operated on. The patient since then has been taking treatments of 606 until he has obtained a negative Wassermann. It burns him to urinate.

Past history: Has had whooping cough

when a child, also measles, mumps, chicken pox and la grippe.

Head: He has suffered with headache and dizziness ever since getting up from the "flu," the pain of the headache being usually in the forehead. Suffers with shortness of breath when he walks much, has puffiness of the eyes sometimes. Never spits up blood, but has suffered with night sweats ever since getting up from the "flu."

Gastro-intestinal: Appetite good usually but suffers with indigestion in the evenings after eating dinner, if he eats anything heavy. Suffers with constipation and always uses laxatives every night. Hasn't suffered with vomiting spells since last year, the vomiting spells started after the patient got up from the "flu," these spells came on after eating and patient would throw up everything he had eaten.

G-U: Has to get up several times at night to make water and urinates about a pint each time; it burns when he first starts urinating. Has had gonorrhoea off and on ever since patient was 19 years old. Taken with syphilis when he was 16 years old and it started on the penis with a sore. Denies ever having a sore on the skin. Patient says doctor cured him up of this and in 1919 he took 606 for his blood. Patient says he has had a stricture ever since January, 1920.

Does not drink tea or coffee and hasn't drunk whiskey for two years. Has lost about eight pounds in last two years.

Skin and mucus membrane O. K.

Eyes negative except for slight corneal opacity at margin of cornea.

Several decayed teeth.

Tonsil on right side slightly enlarged.

Glandular system and thyroid: Inguinal glands on both sides, slightly enlarged and palpable; small masses found in them.

Lungs and heart negative. B. P. 110-80.

Abdomen: Not tender to palpation on the right side but left side tender, especially in the left lumbar region and over the area of the left kidney it is extremely tender to palpation and in the area on palpation the part feels cloggy to the examiner and not of the consistency felt on palpation of the opposite side.

Patellar reflexes normal.

November 18, 1920. *Urinalysis:* Yellow, cloudy, 1012, acid, trace albumin, sugar negative, acetone negative, diacetic acid negative, indican negative, good many pus cells and bacteria, good many pus cells in clumps.

November 18. *Kidney test:* 1st hour 180 c.c., 2nd hour 615 c.c., total 795 c.c.; 1st hour 25%, 2nd hour 20%, total 45%.

November 19. *W. B. C.* 5400, polys 75, small lymph. 25.

X-ray: Kidney pyelogram, left. Examined for size of pelvis. Patient has hydronephrosis of left kidney, the kidney being now a sac nearly about the size of a grapefruit. The ureter appears normal.

November 22. *Operation:* General anesthetic, ether. Left lumbar incision. The kidney is readily reached, is found to have an enormous pelvic distention, which is freed, and, on extending the incision upward, the costophrenic angle is incised for about one-half inch so that there is an escape of air into the pleural cavity. This is clamped and later on sewed with catgut. The kidney can be liberated nicely above, but inferiorly it is impossible, there being apparently an extension of kidney substance down in a curved form, about the size of a child's wrist; across the vertebra, below the promontory and as far as the hand reaches, this excursion extends on the right side, and is lost in this direction. The contents of the pelvis are aspirated and 30 ounces of a dark uriniferous fluid escapes, the tumor collapses and is easily presented in the wound, the pedicle is clamped at the hilum, but inferiorly is still held by this bridge of renal tissue which is resected about 3 inches below the lower pole of the kidney; it is now excised, the ureter tied off and the organ removed. The stump of the tissue left below has every indication of normal kidney tissue; no growths or infectious spots are noted. A large tube is put into the renal space, tissues brought together with catgut No. 2 silkworm gut through the skin. Section of the tumor through the vertebral border of the pelvis shows a much thickened pelvis with hyperemic spots here and there and large caverns spreading toward the cortex so but little renal parenchyma is left.

December 3. Stitches removed, primary union, and patient up.

December 10. Patient gaining rapidly in weight, but complains of some slight pain after eating, referred to a "left McBurney's point" which is taken to be the stump of the actual renal tissue. Leaves hospital.

December 21. Right pyelogram, 20% Na Br. Note the mesial situation of catheter and the pelvis extending across the vertebra, one calyx projecting outwards.

Grace Hospital.

THE INADVISABILITY OF MAKING A HURRIED DIAGNOSIS IN CASES OF SUSPICIOUS TUBERCULOSIS.*

By JAMES G. MARSTON, M. D., Norfolk, Va.
U. S. Public Health Service.

The subject which I desire to present to you this evening I have named "The Inadvisability of Making a Hurried Diagnosis in Cases of Suspected Tuberculosis." It is not my purpose in this paper to enter into the many accepted theories concerned in the diagnosis of the disease but rather to bring out the observations and findings made from a practical viewpoint from the careful study of patients under my actual observation.

You will accept that during the past two years our profession has been busied especially with diseases of the respiratory system and, as a result of the past epidemic of influenza, we have been especially observant for any indication of respiratory disease of a nature disabling. In short, tuberculosis and its diagnosis has become one of the foremost problems. We are constantly on the lookout for the presence of tuberculosis and I believe are somewhat hurried at times to place the diagnosis upon a patient who presents merely suspicious symptoms or signs before we have exhausted all possibilities of study and observation of the case to warrant the actual existence of the disease. Proper consideration, however, must be allowed the shortness of the physician's time and the inability of co-operation on the part of the patient towards the physician from the monetary standpoint. It is against such procedure of hurried diagnosis that I wish to direct your attention and, in support of my statements, to place before you the results obtained in the examination, study and observation of cases under my care. I shall not attempt to occupy your time with a recitation of the cardinal symptoms and signs of the diagnosis of tuberculosis which I assume are familiar to each of you, but will pass at once to the actual discussion of my subject.

*Read before the Surgical Section of the Norfolk County Medical Society, November 29, 1920.

Fifteen cases are selected for discussion. All cases, upon admission to the hospital, were previously diagnosed by the profession tuberculosis. Each case upon admission presented one or more of the accepted cardinal symptoms or signs suggestive of tuberculosis. Each case was thoroughly studied and examined after hospital admission. For concreteness, all cases are divided into groups. Cases in groups one and two represent, upon hospital admission, symptoms suggestive of tuberculosis but with no physical signs found after examination suggesting tuberculosis.

GROUP I. Two cases represented with similar symptoms on admission, i. e., fatigue upon exertion; loss of weight steady and progressive; loss of strength; cough of variable intensity and unproductive. Careful physical examination failed to locate any area of tuberculosis. The temperature range was normal at all times; blood pressure normal; sputum analysis negative for tubercle bacillus.

Diagnosis: Case A, pes planus. Case B, malnutrition. Radiograph exhibit.

GROUP II. Two cases represented with similar complaints on admission which are more suggestive of tuberculosis than complaints of group one cases, i. e., fatigue upon exertion; extreme general weakness; steady loss of weight; cough frequent and variable in productiveness; pain in the chest. Complete physical examination failed to locate any area suggestive of tuberculosis. Temperature variation never exceeded one degree during the entire period of residence. The usual variation was one-half degree or less daily, being the usual normal variation range. Frequent sputum analyses never showed the presence of the tubercle bacillus. Blood pressure low in each case. Both cases of a marked neurasthenic type. Conclusions made as follows:

Neither case diagnosed tuberculosis. Case A, valvular disease of the heart mitral valve. Case B, diagnosis, morphine habitue. This patient always remained in bed and claimed to be too weak to get up. Daily inspection would always bring many complaints of pain in the chest, cough and marked general discomfort. Cough was excessive, unproductive and constant. One day this patient was caught maliciously injuring his gums in order to have expectoration of blood and blood streaked sputum. Investigation as to the purpose of this act revealed the unsatisfying desire of the pa-

tient to obtain morphine medication to which he confessed. He was treated along this line and the symptoms of the tuberculosis promptly disappeared.

Group III. Cases in this grouping represent upon hospital admission symptoms suggestive of tuberculosis and, upon physical examination, physical signs suggestive of tuberculosis, both of which factors, however, following careful study and observation, could not be affirmed tuberculosis. The greatest number of our selected cases fall within this grouping and represent seven major diseases of non-tuberculous classification and are presented in an ascending graded scale based upon their close similarity to tuberculosis.

Abscess of the Lung. One case presented complaining, upon admission, of productive cough; pain in the chest; marked general weakness and loss of weight. Duration of illness four months at admission. Examination showed a muscular development. The breath was fetid and a frequent cough with much sputum was present. Sputum was thick and yellow green and did not separate into layers. Microscopic examination of sputum showed millions of non-tubercle bacilli. Physical findings of the chest were negative for tuberculosis. Temperature variation slightly above normal. Blood pressure low. No loss of weight during residence. Patient remained in hospital ninety days and sputum never showed the presence of the tubercle bacillus. Cough and fetid breath disappeared. Discharged non-tuberculous.

Bronchiectasis. One case represented. A male 24 years of age, 67 inches in height, and 123 pounds in weight, complaining upon admission of frequent and paroxysmal cough with abundant expectoration; pain in the chest; loss of weight and strength. Duration of illness six months at admission. Previous history of pneumonia one year ago lasting five weeks. Examination showed a lag in the expansion of the right chest. Apical percussion was of diminished resonance and breath sounds at the apex were bronchovesicular and intensified. No rales were present. Opposite the scapulae posteriorly the same type of breath sounds were present with many medium and coarse rales present at the beginning of inspiration and end of expiration, inconstant in location and occurrence. Intense bronchial breathing general. Left chest anterior offered no change from the normal. Posterior opposite the scapulae the same findings as of the right chest maintained. Bronchial breathing prominent. Sputum analysis showed an output of 550 c. c. in twenty-four hours, being gray in color and of an acid odor. Upon standing, separation into layers appeared, being thick and opaque below, thin mucus in the center and froth upon the surface. Microscopic examination showed much necrotic detritus and many polymorphonuclear leukocytes. No elastic fibrils. Thirty-six sputum analyses failed to demonstrate the tubercle bacillus. Temperature variation was from one-half to one degree daily and mostly during the periods of paroxysms. Residence in hospital one hundred and thirty-one days. Radiograph exhibit.

Pleurisy Serofibrinous. One case represented complaining on admission of shortness of breath; pain in the chest; cough frequent and productive; loss of strength and weight. Physical examination showed a male of 18 years, height 64 inches and weight 125 pounds. Onset of condition sudden. Examination of the lungs reveals a diminished expansion of the right chest and lung with percussion dullness from the base to the level of the fourth rib. Tactile fremitus absent. Breath sounds distant over lower right chest. Temperature variation septic in character. Paracentesis thoracis was twice performed with the removal of large amounts of straw colored fluid which showed on microscopic examination many pneumococci. Patient improved steadily. Temperature variation in thirty days returned to normal and there remained no area of lung involvement and no rales. Sputum analysis never showed the presence of the tubercle bacillus. Remained in hospital fifty days. Discharged improved and non-tuberculous. Radiograph exhibit.

Chronic Bronchitis. Five cases represented all offering similar complaints on admission. One of the five cases is chosen for discussion and representing the similar findings of the four undiscussed cases. Complaints on admission were pain in the chest; cough excessive and variable; abundant expectoration; shortness of breath especially upon exertion; loss of weight and strength; night sweats. All offered frequent exposure to elements.

The selected case is a male aged 29 years, weight 141 pounds, height 67 inches. Thorough

physical examination failed to show any areas of tuberculosis. Examination of lungs upon different occasions was negative except for intensified bronchial breathing posteriorly opposite the scapulae right and left, where many medium and coarse rales were heard at the end of inspiration and inconstant in position and occurrence. Blood pressure systolic 110 and diastolic 82. Duration of residence eighty-six days. Temperature irregularity scarcely noticeable. Pulse rate showed no irregularity or variation. Repeated sputum analysis failed to demonstrate the presence of the tubercle bacillus. No loss of weight during residence. Radiograph exhibit.

The four other cases which I do not take the time here to discuss offered similar physical findings and in no circumstance was the actual presence of tuberculosis suggested or proven. All remained under observation for sixty days or longer and improvement was at all times recorded.

Gas Exposure Bronchitis. One case is presented being a male aged 35, weight 142 pounds, height 64 inches; complaining on admission of cough, especially upon reclining; abundant expectoration, especially in morning and evening; pain in the chest; night sweats; hemoptysis fresh and warm; loss of weight and strength. Duration of illness one year at time of admission. Previous history of pneumonia of right lung and exposure to enemy gas. Examination showed a diminished expansion of the right chest. Impaired resonance at base of right lung and breath sounds of intensified bronchial character posterior with medium and coarse rales of inconstant location and character. The left chest offered no anterior changes of note. Posteriorly, the breath sounds opposite the scapulae and below were similar to those present in the right chest with medium and coarse rales present. Heart is generally enlarged with a roughening of the mitral first closure sound and all other valve sounds accentuated. Duration in hospital 225 days. Sputum never showed the tubercle bacillus. Temperature range slightly over normal. Blood pressure low. During residence, eight separate attacks of hemoptysis occurred of varying amounts, being bright red in color and frothy and welled up from throat, without sputum or cough.

Cicatricial Contraction of Lung. Interstitial Cirrhosis. This case is a man 59 years of age, admitted to the hospital with the diagnosis of advanced tuberculosis of the lung. Complained upon admission of pains in chest: severe cough with abundant expectoration; loss of weight and strength. Duration of illness three months. The left chest appears retracted at the apex and movement is diminished. Percussion over upper lobe of left lung is flat and breath sounds are amphoric and exaggerated. The right chest is broad and full with hyper-resonant percussion and breath sounds emphysematous. No boundary of the heart is traceable in the right chest and all the valve sounds are heard over upon the left chest and only transmission sound is heard over upon the right chest. Temperature variation normal. Sputum negative for the tubercle bacillus. Residence in the hospital fifty days. Discharged non-tuberculous.

Spinal Osteo-Arthritis. This case was admitted to the hospital with the diagnosis of tuberculosis of the spinal vertebrae. Aged 30, negative family history for tuberculosis; past illness for influenza; history of gonorrhoea ten years ago. Complaints on admission were: Stiffness of back with pain and limited movement of the lower back; loss of weight and strength. Duration of illness eighteen months at admission. Onset with pain in lower back followed by stiffness and difficult movement. No area of tuberculosis was obtainable upon examination of the chest. Size of heart diminished with a mitral murmur present. Wassermann negative for syphilis and sputum negative for tubercle bacillus. Temperature variation normal. Blood pressure systolic 112 and diastolic 82.

Examination of the spinal column showed a rigid non-flexible straight outline from below to the seventh dorsal spine and a forward incline of about twenty-five degrees above. Backward and lateral movement is impossible. Outlines of the vertebral spines are prominent in the midline of the back. Scapulae angles are prominent and contrast strongly against the flat surface of the back below. Vertebral spines are in straight alignment. Muscles of the back are of increased rigidity.

Radiographic study of lumbar vertebrae.—All the spinal vertebrae are clearly visible and no posterior curvature is present. A general uniform narrowing of the inter-vertebral fibro-cartilaginous discs is present, giving the appearance of diminished distance of height from

upper and lower margins rather than in the anteroposterior direction of thickness. The vertebrae proper are nearer each other than normal. There is no irregular displacement of the margins, no overriding of the vertebral margins immediately above and below the discs. Uniformity and regularity of outline exists. No erosion nor evidence of signs of disintegration. Upon the lateral aspects of vertebral margins, right and left, adjacent to the discs, there is a haziness which reaches a quarter of an inch laterally beyond and is confined to the adjacency of the discs. The general total appearance is that of some constructive rather than a destructive process. Suggests a form of constructive arthritis of the intervertebral discs with ankylosis.

Conclusions.

In all the cases presented in this paper, a definite diagnosis of tuberculosis had been made previous to admission.

None of these cases after thorough examination and observation indicated the presence of tuberculosis.

In each case the physician who was among the first to examine the patient placed the diagnosis of tuberculosis without allowing sufficient time and study to substantiate his opinions, being led to his conclusion upon merely suggestive symptoms or signs.

Each case was compelled to adjust himself to the psychological effect that the stamp of tuberculosis placed upon his mental attitude and caused him a greater effort to remove from his mind the fact that he did not have the disease.

In each case the diagnosis was first made by the physician whom the patient had known for some time and to whom he turned for advice when first ill and, because of the confidence held for this physician, he reluctantly gave up his opinions. This last factor should encourage each and all of us to respect that confidence held by our patients and encourage us to never make a hurried diagnosis of tuberculosis merely upon suggestive symptoms or signs of the disease.

The presence of any one of the accepted symptoms or signs of tuberculosis, in the absence of other expected symptoms or signs, is not of sufficient reason for the diagnosis of tuberculosis to be made.

Finally, I do not wish to leave the impression that we should not be energetically on the lookout for tuberculosis. I have merely endeavored to show to you the ease with which any of us may be misled and how unwise or unwarranted it may become to hurriedly conclude a diagnosis without first permitting thorough investigation of every balancing factor that eventually leads to a conclusion.

U. S. Public Health Service Hospital.

Discussion.

Dr. C. Lydon Harrell:—I think the Society is fortunate and is to be congratulated on having such an interesting and instructive paper as Dr. Marston has presented us with this evening. Dr. Marston enjoys a position that makes us envy him, at least I do. He has a large clientele, drawing patients from a large number of physicians, and has them in a hospital, absolutely under his control for an indefinite period. He can have any amount of laboratory or x-ray work done free of charge to the patient. This gives him an opportunity for closer study, and the chance of making a more accurate diagnosis than the practising physician can.

The class of cases he has reported to us this evening was selected from a very large number, and I dare say such a selection would not be found in private practice over a long period, probably several years.

There are two sides to every question; he withholds his diagnosis of tuberculosis for weeks, in some cases, months. This might do in the army and navy, where you have your patient under absolute control, but it is not fair to the person in the average walk of life, coming from homes where there are children and others that might be infected. We know that children are more susceptible to infection under 15 years of age than at any other time, so I do not think it is right that a person should be allowed to go and come, cough and expectorate at his will, if there is a probability or even a possibility of having tuberculosis, without being told that he is at least a suspicious tuberculous case and should be careful.

Dr. Marston's x-ray plates are very pretty. I am not very shrewd when it comes to interpreting chest plates, especially flat plates, but, if I may be allowed to comment, I would say offhand that some of his pictures look very much like tuberculosis to me. Some of them show a great deal of peri-bronchial thickening with a marked density of the apices. I do not recall anything that will show a marked density at an apex except tuberculosis. Probably an injury might. I think we would have to prove this was not tuberculosis rather than to prove that it was. I would like to hear some of the x-ray men discuss that point.

The doctor reports a case of pulmonary abscess that had previously been diagnosed tuberculosis. He did not say what kind of abscess, or why he changed the diagnosis. He also reports a case of pleurisy with effusion, sent in as probably tuberculosis. Pneumococcus was isolated from the exudate, pronounced non-tuberculous. Dr. Marston did not take into consideration what might happen two or three years from now. I think it is the concensus of opinion that pleurisy with effusion means tuberculosis until you can prove otherwise

He reports two or three cases of chronic bron-

chitis in patients under 30 years of age. I would be afraid to say chronic bronchitis under 40 years of age unless he gave a history of inhaling poisonous and irritating gases. On the other hand, I think it by far safer if we suspect tuberculosis to tell the patient the facts in the case and keep him under observation until the diagnosis is made, with the instruction to use precautions in regard to coughing and expectorating, just as you would any other suspected case of contagious disease. As someone has well said, "It is better to have a hundred people plod along through life, 'mistagged tuberculosis' and outlive their expectancy, than to bury one with chronic bronchitis."

I wish to thank Dr. Marston for his excellent paper; it was well worked up and well presented.

Dr. James W. Hunter:—I wish to thank the President for inviting me to discuss this paper. I propose to do so from a roentgenological aspect, as he has suggested. I wish also to express my appreciation to Dr. Marston for the admirable way in which he has presented the subject.

I may say in the very beginning that most of us used to feel that we knew something about tuberculosis. But, as we grow older, we can not feel so sure. Personally, I think that most of the roentgenograms presented showed tubercular lesions; whether a lesion is active or not, however, can not be determined roentgenologically. Often, all that we can say is that the lesion is suspicious.

It is a peculiarity of pulmonary tuberculosis (at least it is in the adult) that the apex is generally infected. So, if we find an apical involvement, or even a thickening of the pleura, the burden of proof is to show that the lesion is not tubercular. Conversely, if a part other than the apex is involved, it is the burden of proof to show that the lesion is tubercular. Syphilis, anthracosis, and the various diseases due to the inhalation of dust, always begin from the hilus; rarely, if ever, is the apex infected. Of peribronchial infiltration much has been said; the matter is still under discussion. But the definite extension of the bronchial lines to the periphery is to be regarded as suspicious. The fan is quite diagnostic.

To sum up: A diagnosis of early tuberculosis is generally possible; whether it is acute or not is impossible from the roentgenological examination alone; the involvement of the apex is to be considered tubercular until it is proven otherwise; and a lesion elsewhere without an apical involvement is, as a rule, to be looked upon as non-tubercular.

Dr. Chas. R. Grandy:—The conditions governing admission of tubercular patients to Government hospitals is very different from that in ordinary sanatoria. The patients come to outside doctors asking for Government assistance when they frequently have no place to stay while they are being observed. As a result, these cases are given the benefit of the doubt, and are put in the Government hospitals labeled "Tubercular," but with the idea that the Government surgeons will have time and opportunity to study them thoroughly.

In the private institutions, the people stay off just as long as possible before being willing to go in for treatment. In the Government institutions they are willing to be labeled "Tubercular" in order to get free support.

As a result of this, between 20% and 25% of the patients to some of the army hospitals have been discharged as non-tubercular.

I do not feel that the ordinary practitioner should be blamed for sending such a case into the Government hospitals, because he has no opportunity to properly observe the case, and feels that the Government is amply able to take care of such a man while making the diagnosis.

Dr. F. C. Rinker:—All of us, I am sure, have had cases in whom it was difficult to make a conclusive diagnosis of tuberculosis. Dr. Marston, I am afraid, is treating the subject of diagnosis a bit too lightly. I had rather make a diagnosis, at least tentative, of tuberculosis in a non-tuberculous patient than make a negative diagnosis in one who had the disease. In other words it is up to us to prove that a patient has **not** tuberculosis rather than to prove that he has.

Regarding the x-ray plates, I do not believe it possible to accurately diagnose lung pathology from the flat plate, believing that they should always be made in stereo. Some of Dr. Marston's flat plates, however, look tubercular and one looks syphilitic with aneurism of the descending arch. Again, the roentgenologist can not make a positive or negative diagnosis of incipient tuberculosis, but it is his duty and place to report areas of density to the clinicians with suspicions, rather than conclusions, and it is the internist's place to make the final conclusion.

The question has come up regarding primary pleurisy. I personally do not believe that such a condition is necessarily tubercular.

Dr. Marston's point regarding thorough study and investigation in all suspicious lung cases is well taken but I believe he tends to lay too much stress on the finding of tubercle bacilli in the sputa.

UNDERGRADUATE INSTRUCTION IN TUBERCULOSIS.*

By WALTER C. KLOTZ, M. D., Charlottesville, Va.
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In January 1920 the Medical Faculty and the Board of Visitors of the University of Virginia created a special department of tuberculosis in affiliation with the new tuberculosis sanatorium which had been established by the State Board of Health, at a site about three miles from the University, near Monticello. As this department is now nearing its second year of operation it might be of interest to physicians of Virginia to know a little more about its purpose, the plan of work and what this department has accomplished.

One of the saddest commentaries on medical education in the past has been the lack of practical instruction and training in the diagnosis and treatment of tuberculosis. Any one who has had any special experience in this work will have met with the unfortunate consequences of this lack of special education on the part of general practitioners. Nor is this

*From the Medical Department of the University of Virginia.

lack of knowledge limited to general practitioners. Occasionally, even consulting internists, who are eminent in their knowledge of other illnesses, will fall wide of the mark when it comes to tuberculosis. While it is the most widespread of infectious diseases and while it has headed the list of causes of death, its place in the medical curriculum has been a secondary one. On the part of the student, the teacher and the interne it has received but scant attention. The mere number of deaths moreover is less significant than the fact that most of these occur during or before young adult life. In other words, its victims are mostly those who have not as yet reached the period of greatest productivity from the social and economic point of view. They are snatched away before they have even begun their life work and the loss to the country on account of this sacrifice amounts to several billion dollars annually, based upon very conservative estimates as to average period of expectancy and earnings. In addition to this, there is the money loss caused by several years of partial or total disability before death; the cost of medical attention, nursing, institutional treatment and burial expenses. But a mere statement of statistics and material loss fails to convey any adequate idea of the hopes blasted, careers ruined, women widowed, children rendered orphans and homes impoverished.

On the other hand, there is the fact, now well established, that if taken in time, tuberculosis can be cured:—that is, a more or less permanent arrest of the clinical disease can be brought about by encapsulation of the tuberculous focus with scar tissue, if the general hygienic treatment is instituted early enough and continued for a sufficiently long period of time. The essential features to be borne in mind are, therefore, an early diagnosis, the proper management and supervision of the individual case in all its details, and the prevention of relapse by instructing the patient how to avoid those evironmental factors that were instrumental in bringing about the original clinical manifestation of active tuberculosis.

Any one who has been engaged in tuberculosis work can recall the countless instances in which a failure to make a diagnosis at an earlier stage has allowed the disease to advance unchecked; the many instances where the patient was not told the nature of his ailment, or where he was only given very vague statements and indefinite instructions as to the regime to follow; or left without further supervision or guidance, to work out his own salvation, with such general advice as "to live out of doors and rough it", or "to eat plenty of good food and build himself up."

That the practitioner who is liable for errors of omission or commission is not so much to blame as the medical school which produced him, has been emphasized repeatedly. Strong appeals have been made again and again for the establishment of special instruction in tuberculosis. The response has been usually that the curriculum was too crowded: that to allot time for a separate department for one disease would be impossible without sacrificing too much time of other *more important* departments; that the student sees enough tuberculosis in the course on general medicine. However, the cases seen in the course of general medicine and surgery furnish only sporadic and unrelated bits of information. It is true that tuberculosis in its various phases is encountered in this way, but the knowledge thus obtained is not systematic and its relation to the pathology, etiology and diagnosis of tuberculosis is not brought out clearly.

More recently, several of our important medical schools have seen the wisdom of establishing special courses in tuberculosis:—Johns Hopkins, through use of the Phipps Dispensary, The University of Pennsylvania through affiliation with the Phipps Institute, The University of Pittsburgh through the agency of the Anti-Tuberculosis League, and the University of Cincinnati through affiliation with the Municipal Sanatorium. Some such connection was necessary, naturally, in order to insure the requisite amount and kind of clinical material.

For the University of Virginia, this condition was fulfilled by the affiliation of the State Board of Health, through its sanatorium located within easy riding distance from the University. In arranging the course, most of the practical work is thrown into the third year. The class this year was divided into four sections and for one fourth of the college year, each section spends three afternoons a week at the sanatorium, devoting a two-hour

period to practical work. Systematized instruction is given in the physical examination of the chest. The various phases; inspection, palpation, percussion, auscultation, with emphasis on the auscultatory cough, are carefully explained and demonstrated, then practised by the student under supervision. The purposes and outlines of history taking are explained, a scheme for the outline of the history is provided, and, using this as a guide, the students begin taking histories themselves. The relation of family history, contact, predisposition, environment, previous illness, occupations, former exacerbations and types of onset are carefully brought out. The correlation of clinical symptoms, laboratory findings and x-ray findings are then illustrated. The student is present at the fluoroscopic examination and hears the shadows described by the radiologist, who is also at the same time the head of the department of radiology at the University. He studies the x-ray plates singly and stereoscopically and compares what he sees with the interpretation furnished by the radiologist.

After all the separate elements in diagnosis have been worked out separately, the student makes out complete case reports on the basis of his own examinations and presents these before the section for further discussion, criticism and comment.

The difference between childhood and adult tuberculosis is demonstrated by actual cases. There are demonstrations of the tuberculin test, the treatment by means of pneumothorax, various complications such as laryngeal tuberculosis and tuberculous enteritis. Cases with hemorrhage are shown and the methods of treatment explained. Autopsy findings are shown and compared with the findings obtained by the diagnostic methods used before death.

In the final lessons, the student is expected to take the part of the consultant physician, to designate the stage of the disease and to outline the general course of treatment, the management and feeding of the patient as he would in actual practice. He has seen early, moderately advanced and far advanced cases under treatment and been shown the difference in caring for patients in different stages at institutions. To stimulate study and research, articles from current medical literature are assigned to students for preparation of abstracts and such abstracts are then presented before the section for discussion.

In the fourth year the student sees various forms of tuberculosis in connection with general medicine and surgery and in the special clinical branches. He meets with tuberculosis of the eye, skin, pelvic organs, the kidney, bones and joints, in addition to occasional cases of pulmonary tuberculosis. Toward the end of this year, a course of six lectures is given, more theoretical, covering the whole subject of tuberculosis in the form of a review and paying special attention to such features as the history of tuberculosis during different periods of medicine, its various conceptions, its bacteriology, immunology, the tuberculin reaction, the serum reactions, pathology, the different clinical forms, the different agencies employed and organized in the campaign against tuberculosis, the relation of tuberculosis to general medicine, to public health and to preventive medicine, with a brief summary of the principal statistical facts.

It is only natural at this stage to take stock and ask ourselves what we are accomplishing. As far as can be ascertained, the students themselves are interested and like the work. In fact, their eagerness and enthusiasm have been the greatest inspiration. How much value it will be to them in later life we would not venture to say now. But we do know this: that they know more in a practical way about tuberculosis than the average practitioner does who graduated without such knowledge. The writer is willing to state that they know more about tuberculosis *now*, than he ever did, years after his graduation and even after a hospital service in which cases of tuberculosis constituted a large percentage of the cases in the medical wards. They have shown by actual examination of patients that they can find and elicit the signs of early tuberculosis *accurately* and *definitely* without any assistance: that they can *describe such signs in detail* and note them *accurately* within the *limit of an intercostal space*. The writer is willing to admit that this is more than he could do before he had begun to take up tuberculosis as a specialty, which he did largely because he himself had become a victim, in consequence of the

limitations of medical instruction in tuberculosis. It must be conceded, moreover, that such knowledge, obtained at a time when the mind of the student is still most impressionable, will be so thoroughly grounded in its application, that it will stay with him through life. The first clinical lessons usually sink in deepest, if imparted methodically, clearly, logically, and with proper explanation of phenomena.

SUMMARY.

1. The early diagnosis of tuberculosis being the most essential feature in its treatment, special instruction in this subject should be a part of the required medical curriculum.
2. Such instruction should be both practical and systematic.
3. Such a special department is both workable and feasible.
4. Such special instruction will turn out graduates who are grounded in the diagnosis and treatment of tuberculosis.
5. Such a course will be or can be made interesting.

INFECTIONS OF THE PARANASAL SINUSES.*

By J. WARREN WHITE, A. B., M. D., Norfolk, Va.

In order to have a clear conception of the infections of the paranasal sinuses, it is necessary to bear in mind the relations of the sinuses to the nasal cavities, and I am, therefore, taking up a brief review of the essential points of their relations.

The nose includes two cavities separated by a partition called the nasal septum. Each nasal cavity is divided by the turbinated bones into the superior, middle and inferior meatus. The paranasal sinuses communicate with the nasal cavity. The frontal, maxillary and anterior ethmoidal open into the middle meatus. The posterior and the sphenoidal sinuses open into superior meatus. All of the sinuses are lined with mucous membrane.

An acute inflammation of the mucous membrane lining the sinuses is a common occurrence complicating acute rhinitis from any cause. In the acute conditions, usually all the sinuses are involved to some extent. Influenza, pneumonia and measles are among the infectious diseases most frequently complicated by suppurative inflammation of the sinuses. Infections of the antrum are frequently caused by an extension of suppuration from the roots of the bicuspid and molar teeth.

The mucous membrane lining the cavities of the sinuses becomes oedematous and swollen when an acute inflammation takes place. The secretions from these cavities are profuse and anything that interferes with drainage from the normal orifices will usually give pain.

In an acute infection of the frontal sinus with retention, there is always a danger of the pus burying through the posterior wall and emptying its contents into the cranial cavity.

In an acute ethmoiditis with retention, the meninges may become infected by the pus burying through the cribriform plate. A retrobulbar neuritis is a frequent complication of an acute ethmoiditis. An inflammatory condition of the nerve, even for a very short time, may mean a complete loss of vision in the eye affected.

In the ordinary cold with neuralgia, there is usually an involvement of the sinuses with slight retention of secretions. In the involvement of the sinuses, the pain is throbbing and may or may not be referred to the sinus affected. The discharges from the frontal, antrum and anterior ethmoidal follow the same course. The posterior ethmoidal and sphenoidal discharges run back into the nasopharynx and are expectorated. There may be a slight elevation of temperature or the temperature may be normal. There is a slight, if any, leucocytosis unless complicated by an involvement of the surrounding tissue.

Transillumination is useful in comparing the sinuses on each side so as to show the extent of the involvement. The roentgen ray is of invaluable assistance when there is the slightest doubt in diagnosis.

The chronic infections of the paranasal sinuses are important because there may be no definite symptoms referable to the nose except a slight nasal discharge which may be more copious in the early morning. There is usually no pain associated with this character of infection. The profession has in recent years come to realize the great importance of focal infection and the many diseases due to foci of infection. I feel, therefore, that one has not done his full duty when making an examination, unless he has made a nasal examination. It may reveal the true source of many nasal

*Read before the Norfolk County Medical Society.

and post-nasal discharges. Distant and obscure symptoms may be traced to sinus suppuration. The symptoms are often not characteristic and no reference is made to the nose. We should always diagnose the source of a purulent discharge from the nose.

The nasal septum, a bony and cartilaginous partition, should theoretically be nearly of uniform thickness and vertically placed, so as to divide the nasal cavity in two equal and symmetrical cavities. This, however, is rarely true and we have a variety of deviations and spurs of the septum. These deformities are due either to traumatism or malformation.

I will not attempt to go into the many methods of treating the diseases of the paranasal sinuses except in a general way. I wish first to emphasize the great importance of unobstructive nasal breathing as a prophylactic measure, and also the fact that cases of nasal obstruction arising from deviations and spurs of the septum can only be permanently relieved by operative interference. In deflections of the septum, the turbinates in the enlarged nostril are hypertrophied. The hypertrophy is compensatory and physiologic. This will usually correct itself after the deflection is relieved. There are still some who advocate the frequent cauterization or removal of these hypertrophied turbinates for the purpose of relieving nasal obstruction. After these measures, the patient has scar tissue instead of mucous membrane, which causes frequent scabbing and other most disagreeable symptoms and, besides, the obstruction is rarely relieved. I think it most important that these deformed septums be resected, as no treatment can be carried out successfully with the normal orifices of the sinuses completely or partially closed during every attack of acute rhinitis.

Personally, I think it a mistake to temporize by sawing off spurs from the septum with an idea of relieving obstruction. If the deflection causes nasal obstruction, a complete submucous resection should be done. Better drainage and ventilation will be given the sinuses and unobstructive nasal breathing will give the greatest comfort to the patient. Nasal infections will certainly have a more favorable prognosis when such conditions exist. The respiratory is probably first in importance of the several functions of the nose.

I will report a few cases to further emphasize the points I have endeavored to bring out.

A man, age thirty, was referred to me by his physician with an idea that there was some focal infection. The paranasal sinuses were suspected because the patient gave a history of two nasal operations and a piece of bone was removed each time. I found the deviation high up to the right and interfering with drainage from the right frontal. The left nostril was almost completely blocked due to adhesions and inflammatory tissue, the result of an attempt to remove a spur on the left side near the floor. The drainage from the left antrum was obstructed and the roentgen plate showed the left antrum involved. A complete submucous resection was done thereby leaving, instead of a bony and cartilaginous septum, a partition formed by two flaps of mucous membrane, thus giving unobstructive nasal breathing on each side and drainage from the left antrum.

A young man, age twenty, was referred to me with a history of albuminuria for several years. He had learned to test his urine for albumen and found that work to any extent, either mental or physical, increased the amount of albumen, so he had become very despondent about himself. At the time I saw him he was very thin and emaciated, but said that he had recently lost in weight. On examination, I found the septum thickened and deviated with almost complete nasal obstruction. I did a submucous resection of the septum and also a tonsillectomy. Four months after the operation he has had no return of the albumen and is physically in good condition.

A man, age forty-five, was referred to me by a dentist, because of an infected antrum due to a diseased tooth. The antrum was opened intranasally but drainage was unsatisfactory on account of a large spur blocking the opening. After several weeks of treatment, I did a resection of the septum and no further treatment was required as the drainage was not blocked.

A man, age thirty-five, was referred to me with a considerable cough and a slight rise of temperature in the afternoon. The physician thought there must be some focal infection as he could find nothing after a most thorough physical examination. There was pus in the middle meatus and a slight tenderness over the right frontal. The intranasal operation was done and suction applied, removing con-

siderable pus. Suction was applied daily and in ten days there was complete recovery. The intranasal route is an ideal method for the frontal sinus operation. This method, of course, is not applicable in all cases.

A young woman, school teacher, age twenty-five, came to me. She had consulted several internists. They had given her a most thorough examination but no one had made an intranasal examination. I found pus coming from the left frontal and the anterior ethmoids. The drainage was blocked by a thickened and deviated septum.

A man was referred to me on account of interference in vision of right eye. He gave a history of a recent attack of acute rhinitis. Vision was 10/200 in right eye and 20/20 in left eye. On examination I found pus coming from the ethmoid cells. The intranasal operation was done and suction was applied daily. In ten days the vision was 20/20 in right eye.

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PEDIATRIC CLINICS:—CLINICAL AND ADMINISTRATIVE MANAGEMENT.*

By SAMUEL NEWMAN, M. D., Danville, Va.

The modern Pediatric Clinic as a public health activity is the result of several evolutionary phases. It first began with the simple milk station which had as its sole aim the distribution of pure cow's milk. A further development was marked by the connection with the milk station of a trained nurse who furnished directions for the home modification of milk.

An advanced step in the development of the Pediatric Clinic is the association with it of a physician who possesses specialized knowledge in the theory and practice of infant feeding and a specially qualified nurse who is to carry out in detail the feeding scheme of the physician. The best developed clinics of this class take the responsibility for the infant's welfare in its every relation and aspect from the day of its very birth up to a certain definitely fixed age of the child.

The most perfect example of the latter type of clinic is the Berwind Maternity and Infant Clinic, located in the heart of the New York East Side. A brief outline of its organization and clinical management will be given in order that those of us who are interested in this subject may have an idea of the *model* in this field.

The care of the infant at the Berwind Clinic begins—as it should—long before it is born. The applicants for the benefits of the clinic are of the class entitled to free treatment. Aside from the thorough examination of the prospective mother, a complete examination by experts is made of the social, economic, racial and eugenic background of the prospective infant. The privileges of the clinic are granted only after an agreement on the part of the mother to allow the clinic only to manage the nutritional life of the infant for the first year of its life. The clinic deals only with the nutrition of the child and with all the problems arising directly from it.

When the baby arrives, its weight and measurements are recorded. After two weeks the mother is expected to bring her baby weekly until one year old for weighing, measurement, and general examination. All feeding problems are discussed and settled at those weekly conferences. Failure to report to the clinic for even a single weekly examination is immediately checked up by the office force and a nurse visits the infant and weighs, measures and examines it. The records are thus kept complete in every detail.

The outstanding features of a clinic of that type may be summarized thus:—

(a) The records of the clinic are most complete and form a real repository of important data for the social and clinical investigator.

(b) Various theories of infant feeding can be thoroughly tested out and their clinical applications determined and compared with one another.

(c) Erroneous notions concerning the care of infants both on the part of physicians and mothers, can be combated in a very effective way. This statement will be illustrated later.

I shall now mention briefly the controlling clinical ideas of the Berwind Clinic. The clinic is not controlled by any sectarian system of medicine and is not given to fads and experimentation. Its clinical head is the attending pediatrician of the Mt. Sinai Hospital.

FIRST.—The overwhelming majority of mothers *can* feed their children. Too often does the physician allow himself to be persuaded by the nursing mother that her milk is *failing*, is *too rich* or *too poor*. In many instances, the

*Read at the meeting of the South Piedmont (Va.) Medical Society, in South Boston, November 23, 1920.

physician himself is the source of such a notion. While the existence of such a condition as failing milk, too rich or too poor milk, is not denied, yet the number of such cases can be reduced to a negligible minimum. The truth of this statement is being demonstrated in that clinic in such a way:—A mother comes to the clinic for a formula stating that her milk has been failing for the last month or so. The mother is kept until the nursing hour and the infant is weighed *before* and *after* nursing. The difference in weight represents, in most cases, the normal amount of milk the infant needs and the mother is thus convinced that her apprehension is unfounded. In a similar way, notions of poor or too rich milk are combated by a demonstration of the graphic weight curve to the mother. Only loss of weight for a period of two weeks or stationary weight for a period of three weeks suggests the necessity of supplementary feeding.

Second.—When artificial feeding becomes necessary, the average pure cow's milk meets almost every condition—including cases of rickets, marasmus, digestive and infectious diarrheas. The average baby is fed with a simple dilution of cow's milk with the addition of table sugar. Most of the infectious and digestive disorders are managed by a manipulation of the simple cow's milk formula with the substitution of one kind of sugar for another. Complex preparations of milk, as well as any proprietary foods, have no place in that clinic. During my residence there in the summer months, when clinical material was most abundant, Finkelstein's protein milk had to be resorted to in very few instances.

Third.—Drug Administration. The principle "Never to prescribe a drug without a sufficient and good reason," enunciated by pediatricians, is the ruling faith at the Berwind Clinic. In babies with definite clinical and pathological conditions, the *diet* received the first and last attention.

In conducting a Child Health Centre in Danville, Va., under the management of the local Health Department, the Berwind Clinic in New York City was taken as the *model*. We used a uniform sheet for the history of the mother and child. On the whole, a sufficient number of cases attended the clinic regularly and continuously to justify the claim that responsibility for the nutritional and clinical management of these rests entirely with the clinic. The number and variety of cases warrants also a classification into several clinical groups, ranging from the simple undernourished to the extreme marasmic group. Time will not permit me to describe in great detail the management of many cases in the different groups. By way of illustration, I shall cite the management of only one case in each group as gathered from the records of the cases. By way of introduction I wish to say a word concerning the equipment and personnel of the clinic.

The equipment consists of a weighing scale; a number of the usual eight ounce nursing bottles; tin boxes with a wire rack to deliver six or seven bottles for a whole day's feeding; Robinson's prepared barley flour; table sugar, milk sugar, and Mead's Dextri-Maltose No. 1. Occasionally we would have to use a preparation for *dextrinizing* gruels. The personnel consists of a physician and a highly efficient nurse specially trained in child welfare work.

The cases I shall divide into five groups.

Group I.—Undernourished Children. *Illustrative Case*: Mother is 43 years old. Weight of child at birth, 7.5 pounds. Weight on first examination at the clinic, 10.5 pounds; age of child, six months; therefore 5.5 pounds underweight. Maternal nursing stopped when baby was four months. Her reason for discontinuing nursing was her believing that her milk was bad. The artificial food consisted first of condensed milk, later of malted milk, and last of peptonized milk. The mother was advised to resume four maternal feedings, supplementing them with the bottle, and to give two feedings with the bottle alone, making six feedings a day with an interval of three hours between feedings. The record shows a weekly gain of weight. At nine months the baby receives only five bottles and its weight is 19 pounds. The milk formula consists of cow's milk, lactose and plain boiled water.

Group II.—Artificially-Fed Children In General. In adjusting a formula for any child, no matter what its age, we first take its weight and start out with a formula very much below the caloric requirement of a baby for that age and weight. At the end of one week the child is weighed and we see if it lost or gained in weight; if lost, the formula is slightly increased; if the gain represents four

ounces, no change in formula is made for one more week. The principle is not to change formulas too often and to give each at least one weekly trial. The feeding interval is *never* less than three hours and the number of bottles rarely over six. Caloric feeding is not a safe guide, but when the first adventure into artificial feedings becomes necessary it is good to have the caloric requirement per pound of body weight in mind in order to start considerably *below* it. Whole cow's milk is always used, the diluent being plain boiled water or barley water. Either plain or lactose sugar is used, occasionally Mead's Dextri-Maltose, when sugars do not agree well.

Illustrative Case: Infant one month old and 6.25 pounds at time of examination. Weight at birth not known. Lost its mother and was handled by several people. Very emaciated; skin wrinkled, "old man" appearance. With double catheter I washed out its lower intestines with warm saline. For 12 hours I ordered only boiled water; for the next 24 hours weak barley water; the following day skimmed milk well diluted and with no sugar, gradually working up by the end of three weeks to 11 ounces of whole milk, 17 ounces of water, and 1 ounce of lactose. The gain in weight for the three weeks was 11 ounces. The caloric value of the last formula is 48 per pound of weight, and on this formula the baby gained one pound in the next three weeks, after which the formula was again increased.

Group III.—Rickets. *Illustrative Case:*—Child five and one-half months old and 11.25 pounds on first examination. Weight at birth 8 pounds; therefore 5.5 pounds underweight. Maternal nursing discontinued because mother was told that her milk did not agree with the child. Many complicated processes of preparing food and all sorts of proprietary foods were tried with very poor results. The child is anemic, extremely undernourished and with wide-open fontanels. The ends of the long bones are thickened, general sweating profuse and constipation most obstinate. Child had to have a daily enema. In its food, which then consisted of peptonized milk, the child received daily four teaspoonfuls of milk of magnesia and some tablets of lactic acid bacilli. After a colonic irrigation of warm saline, I put the child at once on a skimmed milk formula with Mead's Dextri-Maltose, gradually working up to 27 ounces of whole milk, 8 ounces of barley water and 1 ounce of Dextri-Maltose by the end of 8 months, when its weight was 15.75 pounds—a gain of 4.5 pounds in ten weeks! The rickety condition and constipation is being combated with fruit juices with good results, the baby having now a normal evacuation of its bowels once a day.

Group IV.—Marasmus. *Illustrative Case:* Child 8 months old; 11 pounds at time of first examination. Breast fed until 6 months, when its weight was 17 pounds. Mother had to go to work and the care of the baby was entrusted to a colored girl. Baby presented the most extreme picture of emaciation and "old man" expression. Excoriations and bed sores covered the napkin region and a hemorrhagic purpura the rest of the body. Temperature per rectum was 104 and examination of chest revealed a broncho-pneumonia. This apparently hopeless case was shown to several physicians at the Danville General Hospital and presented a challenge to the civic pride of the community. It was thought that only a wet-nurse could offer the baby a fighting chance, but none could be secured. I ordered a colonic irrigation with several quarts of warm saline and carried the child through a graduated series of formulae from plain boiled water to the present formula, which consists of 27 ounces of whole milk, 9 ounces of thickened barley water and one ounce of table sugar. Only four weeks after its most extreme condition the child consumes a normal quantity of food and already borders on the normal. However, other cases of marasmus had to be managed with dextrinized gruels or whole milk with Mead's Dextri-Maltose.

Group V.—Gastro-Intestinal Upsets Secondary to Colds, Bronchitis, or Broncho-Pneumonia. Many of these cases were brought to clinic. In all these the prime consideration was the *diet*, the gradual weakening and gradual strengthening of the artificial food formula. Nature was allowed to take care of the primary trouble. The maxim "Never prescribe a drug without a good and sufficient reason," was followed very tenaciously. The good and sufficient reason was never the *ill* baby but always the *well* mother, which occasionally prevailed upon me to prescribe the conventional medicine with a resulting upset of the baby's stomach.

A study of the records of the Child Health Center in Danville, Va., points to the following conclusions:—

First.—More mothers can nurse their babies than the laity and even some physicians suppose.

Second.—The structure of the artificial food formula is very simple, consisting of whole cow's milk with plain or barley water as diluent and either plain or lactose sugar or Mead's Dextri-Maltose. The addition of lime water practiced by many is based on three errors. The first is the belief that human milk is alkaline whereas it is faintly acid to phenolphthalein. The second error is the presumption that the acidity of cow's milk is harmful; we now know that fairly large amounts of lactic acid may even be beneficial. The third error is that lime is necessary in order to cause a fine subdivision of the casein of cow's milk in the infant's stomach. This is not very important because proteolysis in the stomach is relatively unimportant compared to the tryptic digestion in the small intestine.

Third.—Practically every case of disordered nutrition from the simpler to the marasmic types can be fed with cow's milk, its modification consisting only of simple dilution with the addition of the proper amount of sugar or Dextri-Maltose. Some cases of marasmus can be managed with *dextrinized* gruels.

Fourth.—*Diet* is the corner stone of the baby's well-being under every condition of its life; upon it—*diet*—should the undivided attention of the physician be focused. Drugs do not occupy the seat of honor in pediatric practice.

THE SPECIAL SOCIETY—ITS PURPOSES AND POSSIBILITIES.*

By HUNTER H. McGUIRE, M. D., F. A. C. S., Winchester Va.

First, I want to express my appreciation for the honor conferred upon me by the small but earnest group of workers who met in Petersburg, and who are responsible for the organization of this Society. To be chosen the first presiding officer of an association of my fellow Virginians who are laboring in a special field of medicine, and to be trusted with the guidance of a society in whose membership are men who have won for themselves enviable reputations in ophthalmology and oto-laryngology, is more than I deserve.

I can only cherish the hope that, by the inspiration which must inevitably result from association with men who have made good and by united effort on the part of those of us who have thought it wise to set in motion the machinery necessary for the accomplishment of our purposes, this Society will, in due time, become what it is destined to be—an honor to the State and an efficient working body of men of scientific attainments.

Before going into its purposes and possibilities, please let me remind you that the Society is, as yet, only passing through the stage of its infancy. It must be nourished, it must be fondled, it must be handled carefully, and its growth and development must not be retarded by undue criticism and harsh judgment. The stage of adolescence and full maturity cannot be reached in a day or a year. It requires time and patience and determination to develop a really scientific organization and only by cooperative effort and enthusiastic purpose is it possible to build up and establish on a firm foundation, an association which will not lie dormant, but will ever continue to function.

Now what are some of the purposes we should keep in mind and what should be the aims and aspirations of this organization?

The distinguished mother of all the special societies in this country, and possibly, with one exception, the oldest organization of its character in the world, The American Ophthalmological Society has, in its constitution and by-laws, a very significant phrase and it reads thus: "The Purpose of this Society shall be the advancement of Ophthalmic Science and Art." This brief but forceful statement, it seems to me, embraces what should be the attitude of this organization with respect to the sciences of ophthalmology and oto-laryngology.

We should take particular pride in the fact that the specialties which we represent have made wonderful and rapid advances, probably as many, if not more, than the other branches of medicine, but, at the same time, we must not fail to recognize that many, many problems are, as yet, unsolved and that as an organization of scientific men it becomes our imperative duty to make an honest effort to shed some light in the dark spots and to evolve from the many questions, which now remain in obscurity, basic principles upon which true conclu-

*President's address before the Virginia Society of Oto-Laryngology and Ophthalmology, in Richmond, February 3, 1921.

sions may be founded. This can only be accomplished by intensive study of the problems which confront us and by a united effort to solve them.

May I venture to offer some suggestions for the conduct of this society and for the fulfillment of its purposes?

In the first place, it seems to me that the character of papers presented for our consideration and discussion should be of a very different type from those which we, at times, have the opportunity to read in a general medical association. The general practitioner is not interested in the scientific phases of ophthalmology and oto-laryngology. He has neither the time nor the inclination to study their problems and he is only impressed and helped by listening to a paper which may contain something of practical value to him in his daily work. I say this with absolutely no disrespect to him or his knowledge, for he can no more be expected to study our problems, than we, as specialists, should undertake the study of the subjects in which he is peculiarly interested.

Our object should be the elucidation of the unsolved questions which pertain to our specialty and an organization which has this as its fixed purpose will accomplish something worth while.

With regard to the nature of the scientific communications made to the society, it occurs to me, we will do well to keep in mind the standards required by the Section on Ophthalmology of the American Medical Association, to wit:

(1) They shall contain and establish positively new facts, modes of practice, or principles of real value; or

(2) They shall embody the results of well devised, original, experimental researches; or

(3) They shall present so complete a review of the facts on any particular subject as to enable the writer to deduct therefrom legitimate conclusions of importance.

Nothing will be more instructive and will be more conducive to intensive study than the adoption of a well conducted symposium at each meeting of the society. A systematic and thorough analysis of the various phases of any subject, by men of different viewpoints, has its advantages and, inevitably, leads to more logical conclusions than would have otherwise been obtained.

The submission of case reports is an important and desirable feature in every special society. Nothing, however, detracts more from the value of a case report than the lack of sufficient data upon which to base definite deductions. The reporter should not draw inferences until he has well weighed all of the evidence in the case and, unless full details are presented, which in themselves serve to point conclusively to a rational deduction, the record fails to be convincing. While the report of a series of cases in which the results of treatment have been uniformly successful is always interesting, from the viewpoint of a scientific society it is just as important to report failures as successes. This enables the organization to place a true value upon any theory which may have been advanced by the writer of the report as the result of his observations.

The attractiveness and value of every scientific program is enhanced and its points illumined by an animated discussion of the questions under consideration. There are many brilliant men in our medical associations who, endowed with the power of oratory and the gift of expression, together with a profound knowledge of the subject under discussion, can, without preparation, impart their knowledge to others in a convincing and attractive manner. The most profitable discussion, however, is the result of an exhaustive pre-sessional study of the subject in question and an analysis based upon this study. This can best be obtained by a comprehensive consideration of the progrom before the meeting of the society.

The plan adopted by the Section on Ophthalmology of the American Medical Association, with which you are all familiar, of printing a pre-sessional volume, containing in full all the papers to be presented, is an ideal one, but the expense of such an undertaking would be too great for a small organization. In lieu of this, it seems to me, it would be a wise provision to require each author to furnish a brief abstract of his communication and that this abstract, with the title of the paper, be made a part of the program. By adopting such a scheme, those who desire to discuss papers will be in a position to do it more intelligently than if they had no knowledge of the subject about which the essayist is to speak.

I am sure you will agree with me that the success of any organization depends largely

upon the loyalty of its members and their willingness to attend its meetings. The man who habitually absents himself from medical meetings without valid excuse is not only a discredit to the organization with which he is affiliated but places himself in an unenviable light in the estimation of his associates. It is an incontrovertible fact that the busiest men in the profession and those who have done so much to elevate the standards of ophthalmology and oto-laryngology let nothing interfere with their annual pilgrimages to medical meetings, and attendance upon these gatherings they count as a privilege rather than a duty. The man who stays at home, when his colleagues have assembled to interchange ideas, to study with other men the problems of their life's work, to correlate and put into practice principles of real value, and to endeavor to uplift and to advance the profession they represent, rarely acquires that breadth of vision and that well developed intellectual capacity which go to make up the ideal physician. If he is content to rest upon his laurels, to rely exclusively upon his own judgment, and to sit idly by while his fellow workers assume the responsibilities and shoulder the burdens which should be his, he cannot expect to attain that position of honor in the profession to which he should be entitled or to hold the confidence of the community in which he practices.

The attitude of the public with respect to the efficiency of its medical men has undergone radical changes in recent years. Medicine is no longer a mysterious and occult science and, fortunately for us, the public mind has been enlightened far beyond our expectations with regard to the many phases of its activity.

Our patients demand, and justly so, that we keep abreast of the times and that, as the science and art of our respective specialties advance, we too should go forward and give to suffering humanity the benefit of our knowledge and our experience.

I know of no one agency which is capable of developing, to a greater degree, that desire for advancement and that insatiable thirst for a knowledge which will develop the best that is in us, than a scientifically conducted medical association. It creates and develops in us the incentive for harder work, for higher ideals and, more than this, by bringing together and uniting with bonds which cannot be broken men of like aspirations working together in a common cause, it becomes a force which must be reckoned with and an influence for good in the State and in the Nation.

And so, my friends and my fellow workers, with your co-operation and the strength which can only come from men who are determined to devote their time and their talent to the accomplishment of their purposes, we venture upon this new undertaking with confidence and with hope, not unconscious of our imperfections, but strong in the faith that we can help, in our special sphere of activity, to uphold the traditions which have given to Virginia so much honor and distinction.

THE PHILOSOPHY OF MEDICAL DIAGNOSIS.*

By WARREN T. VAUGHAN, M. D., Richmond, Va.

The primary function of each member of the medical profession is and should be the prevention and cure of disease. This is true whether the physician be in a clinical branch of medicine, in direct contact with the patient or whether he be in the laboratory, working towards the improvement of existing diagnostic or therapeutic measures. But, before one can successfully treat any case of illness, it is essential that a correct as well as a complete diagnosis be made.

In the diagnosis of disease in internal medicine, I have frequently clarified the situation in my own mind by comparing the process to that employed by a detective in the execution of his work. Medical diagnosis is but a detective game. The patient presents himself to the physician with a story of having lost something. He has lost his sense of well-being, he has lost his health and he asks you to discover when and where he lost it, why he lost it and how he may recover it. He is able to give you some information, a certain number of clues, and with these as a basis the search must be begun.

When a detective is placed upon a special case, does he proceed at once to the site of the robbery and start there his search for clues? Not as a rule. First he goes into the history of the case with notebook in hand, for he does not trust his memory; he asks numerous relevant and many apparently irrelevant questions

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of the complainant. He enquires of much before the date given as the time of the loss. He searches for motives, for predisposing causes. Frequently, it is necessary to go into the past life of the individual and to question in great detail regarding his associations. In other words, the history of the case is the first and one of the most important subjects for study and this must be followed out until all possible sources of information have been exhausted.

Next, a general survey must be made. All facts are to be ascertained. All available data must be accumulated. After the complainant has told all he knows, the detective will proceed to examine the territory where the loss occurred. He will make a complete examination. He will pay as much attention to the apparently unimportant as to the apparently extremely significant phenomena. At this stage he is not stressing the important clues but is endeavoring to maintain suspended judgment and to note down all facts so that later he may study them in greater detail at leisure, and decide as to the relative values of each.

We are all acquainted with the story of Sherlock Holmes. Remember how Doctor Watson invariably made an incorrect diagnosis. This was because he lacked perspective and stressed unimportant bits of evidence.

Even the best detectives will overlook some clues. It is often necessary to go over the ground a second and even a third time. Frequently, special leads will turn up and these should all be followed to the end. Sometimes the detective finds a condition which he does not consider himself competent to pass upon. He may find finger prints on a safe. He wastes little time studying these, but calls in a finger-print expert. At times it becomes necessary to call in criminologists or other specialists.

As I have previously stated, it is extremely important that the investigator maintain throughout the period of his inquiry a state of suspended judgment. After he has acquired all available data, he will proceed to a critical analysis and will determine the important facts most intimately connected with the case. After having dissected the evidence, he will piece it together and will construct an hypothesis to explain all of the facts.

Perhaps I can better emphasize the importance of suspended judgment by the following analogy. If you were a stranger in America, unacquainted with the army uniform and had been walking about in one of the great army camps during the war, you would have observed that all of the uniforms, both those of officers and enlisted men were the same. They look practically identical. Passing them hurriedly on the street, you would not notice the small metal ornament on the shoulder which alone distinguishes the general from the enlisted man. Passing them, one after another, you would be unable to decide as to relative importance. But, if later, you were to wander out onto the parade ground and there saw the troops in review you would easily recognize from the orderly arrangement of individuals into groups and of small groups into large groups that the individual of chief importance was the one riding at the head of the entire procession. It is only after the evidence has been sorted out by analytical methods and rearranged into co-ordinated groups that relative values appear.

All that I have said of the detective's routine holds equally well for the methods to be followed by the diagnostician.

When the diagnostician has formulated his explanation he has not yet reached the stage of diagnosis but only that of hypothesis. It is true that, from the important clues, he has hypothecated an explanation for the patient's malady. This is not the diagnosis. He may have made some error in his reasoning. Far too often medical men are content to stop at this point and to assume that the hypothesis is the final diagnosis. Much more should be done. The hypothesis must be tested and, if it is found to fail in the explanation of any single phenomenon or if it is found to disagree with certain observations, it must be discarded. On the basis of the discarded hypothesis a new one will then be selected and eventually one will be discovered which will fulfill all of the requirements and which may be designated the diagnosis.

Not all detectives are good detectives. Ability to diagnose disease depends on many personal attributes. A few of the important ones may be mentioned. First the examiner must be blessed with strong curiosity. As Barker has well said, feeble curiosity is the cause of too many snap-shot diagnoses and errors in diagnosis. One must not rest satisfied until all phenomena have been satisfactorily explained. The most insignificant variation from

normal in any of the body organs must be studied in detail.

Again, the examiner must be able to recognize a problem in the case before him. If a patient presents himself with intractable hiccough, he must not be treated with palliative measures alone but the physician must recognize that there is a problem for diagnosis. Is the disease due to pathology in the stomach: is it due to a localized peritonitis; or is it even due to impending uremia? Is it an instance of the epidemic hiccough which has been reported as accompanying epidemics of lethargic encephalitis?

One must possess sufficient perseverance to follow out all leads and sufficient judgment to distinguish the important from the unimportant.

Past experience with similar conditions is of great aid. Other qualifications being equal, the man who has seen the greater amount of clinical material is the better qualified to make a diagnosis. Fortunately, in medicine, we may profit by the experience of others. A good preceptor is of inestimable value. The individual who keeps abreast of current medical literature is adding to his own experience by reviewing and assimilating the experience of others.

Barker gives the successive steps in medical diagnosis as, first, the recognition of the presence of a problem; second, the accumulation of data which may be used in the explanation of the problem; and third, a consideration, or pondering of the data; followed by, fourth, elaboration by reasoning, of the various phases of the problem. Fifth, the suggestions arising from this elaboration must be tested out for accuracy and for adaptability.

Let me cite one or two cases which will serve as examples of some of the points emphasized in the foregoing discussion.

A middle aged patient, male, presented himself for diagnosis. His story was briefly that of intermittent recurrent pain in both shoulders, coming at irregular times, not definitely localized, and not affected by any form of treatment. He also complained of tenseness over the anterior surface of the left thigh. He described this as a sensation similar to that occurring after painting the skin with iodine. Finally, he had a feeling of mental oppression, a sense of pressure on the brain. In these complaints there was a suggestion of what we unfortunately call the "neurotic element," but there was no evidence whatever of any psychopathic state. The patient was a rational, useful member of society.

A complete physical and laboratory examination was made. There was no limitation of motion in any of the joints of the upper extremities and there was no tenderness on motion or on pressure. There was just sufficient discomfort on elevating the arm to cause a suspicion of subdeltoid bursitis. Roentgenograms were made of both shoulder joints and it was found that, while the right was negative, the left showed the characteristic calcification of a subdeltoid bursitis. The diagnosis of bilateral subdeltoid bursitis was made.

But this by no means completed the case. Why did he have his bursitis? Search was instituted for some focus of infection. None was found. Roentgenograms of the teeth had been negative. The patient had given no definite gastro-intestinal history of disease, but on going over the symptomatology a second time, he remembered that several years before, he had had symptoms very suggestive of recurrent attacks of acute appendicitis. Barium studies were made and the appendix and caecum were found to be immovable. The assumption is that the focus of infection lies in a diseased appendix. The patient has not as yet been operated upon but I would emphasize the fact that we have not even yet reached the stage of diagnosis. We are still dealing with hypothesis. The final diagnosis will not have been completed until after we have followed the results of post-operative treatment.

But we have not explained all of the patient's symptoms. Why has he this feeling of tenseness in the left thigh? Examination showed a moderately enlarged left internal inguinal ring with impulse on coughing. The patient incidentally suggested that in driving a Ford he uses the left leg a great deal. As regards the mental oppression, we hypothecate that the pathology previously described, together with the fact that the patient is a physician working constantly and worrying about his condition, is sufficient to explain the mental symptoms.

This case emphasizes perhaps chiefly the importance of strong curiosity. The diagnosis of bursitis is insufficient. One must find the cause of this condition if possible and then if the hypothesis does not explain all symp-

toms it must be either discarded or added to. As a rule it is safer to discard the hypothesis and secure another which unaided will explain all symptoms.

A second case is of some interest as showing a lack of perseverance. This time the lack was on the part of the patient, but this is by no means the rule. The patient came in for examination a year and a half ago. He had certain gastric symptoms suggesting organic disease of the stomach. The usual routine examination was made together with special studies of the gastro-intestinal tract including barium studies. No pathology was found but, in view of the character of the symptoms, the patient was advised to return in four weeks' time for another barium examination. He did not return, and was not seen until a year and a half later. Barium studies at this time showed the presence of an inoperable carcinoma of the stomach. If this patient had been fluoroscoped every two months during the interval, there would have been some time in the eighteen months when the diagnosis would have been made and at a time when the condition would probably have been still operable.

I would like to say just a word with regard to the present day trend toward specialism in medicine. I like to think of all physicians as specialists in their fields. The general practitioner, the family physician, is a specialist as much as is the neurologist or the oto-laryngologist. He has those qualifications, particularly the personal qualifications, which will make him successful in his chosen field. Others eminently successful in their specialties as surgeon, internist, or what not, should they enter the field of general medicine, would in many instances find themselves ill adapted and unsuccessful.

The general practitioner comes into more intimate personal relationship with his patients than does any other specialist. His knowledge of the patient's mental make-up has been acquired through years of contact and observation. He is possessed of a type of information obtained only with great difficulty by the individual whose only contact with the patient is in the office.

Sir James MacKenzie, who is to my mind the greatest living family physician, has delineated very clearly the character of scientific knowledge that can be contributed by the general practitioner and by him alone. He points out that as a rule the patient suffering from chronic disease first presents himself to the physician complaining of subjective symptoms only, and at a time when no pathologic physical signs can be detected. The average medical student fresh from the hospital has been trained to recognize physical signs and is in the habit of concluding that those patients, in whom he cannot find evidence of disease by physical examination, are not suffering from somatic disease.

On the contrary, the majority of individuals attending the general practitioner do not present abnormal physical signs. It is he alone who has the opportunity of studying chronic disease in its incipiency, at a stage where a permanent cure may most be hoped for. Moreover, he alone usually follows disease in one individual from its beginning until its final termination. His knowledge of the individual case is a "moving picture" acquaintance, as contrasted with the "single exposure" viewpoint possessed by the consultant. It is on the man who sees chronic disease in its incipiency that we must rely for future improvements in our methods of early diagnosis and curative treatment.

This task is by no means a simple one. And yet, with the development of the so-called functional methods of examination, it is becoming less difficult. During the last quarter of the nineteenth century, clinical medicine was dominated by the new observations made in *structural pathology*. During the last two decades we have passed onward, with the development of tests of function, to a study of *functional pathology*.

Instead of viewing with dismay the extensively damaged kidney at autopsy, and wondering "how could he live so long?" we now, on the living, test the efficiency of the kidney, while enquiring to ourselves, "how long can he live?" No longer, "how much tissue is destroyed?" but "how much good tissue remains?"

We already possess many valuable functional tests, applicable to different organs of the body. One of the oldest used is that employed by the psychiatrist—the test of mental function. Functional cardiac tests were invaluable in the army. The pulse rate and blood pressure responses to exertion are functional. Palpitation may be included. Gastric test meals measure the secretory or digestive and the motor

function of the stomach. We possess similar tests for pancreatic function. Examination with the opaque meal is a functional test in so far as increased or decreased motility of the stomach and intestines is observed. A functional test for hepatic cirrhosis, little used but often of great value, is Goodpasture's fibrinolysin test. Tests of renal function have become so well known that they require but mention.

And the list is by no means complete.

The main endeavor today is to develop functional tests so delicate that they will warn us of the earliest deviation from normal. When this is done, much will have been accomplished.

St. Elizabeth's Hospital.

FRACTURES OF THE FOREARM, INCLUDING INJURIES TO THE ELBOW AND WRIST JOINTS.*

By EDWARD E. FEILD, M. D., F. A. C. S., Norfolk, Va.

Fractures of the upper extremity are probably more numerous than those of all the other parts of the system put together, and the radius is broken more often than any other bone. In its upper part, it is probably never broken except by direct violence or by a fall on the hand, and then, at or below the neck. Injuries to the upper part of the ulna are usually confined to the olecranon or coronoid processes, and are caused by direct force, although the former may result from muscular contraction. Fractures of the shafts of these bones are rare, except at or near the wrist, and usually are caused by direct trauma, in which instance both bones are involved, as a rule, and the fracture often compound.

Fracture of the coronoid process is extremely rare, except in a crushing blow to the elbow joint, in which event the olecranon and the radial head would in all probability be involved, and the wound compound.

Fracture of the olecranon, on the other hand, is not uncommon, and may occur from direct injury or from contraction of the triceps muscle. The fragments are often but not always separated. This injury may be treated with a straight splint reaching from the shoulder to the fingers and well padded so that the elbow is at an angle of fifteen degrees and the hand in supination, provided the fragments can be placed in close apposition and held in position by strips of adhesive tape. Unless there is some contraindication, if the fragments are widely separated, they should be sutured together with kangaroo tendon. This should be done within a few hours after the injury or deferred for a week or ten days. If the injury is compound, suturing should be done at once, and the arm placed on the straight splint as described above. If there is no displacement of the fragments, the arm may be put up on the angular splint and adhesive tape used to retain the position.

In wiring or suturing the fragments, be sure not to let the suture go far enough to enter the joint.

Fractures of the lower part of the ulna are generally confined to the styloid process and are rare except with some other injury to the wrist. Fractures of the lower part of the radius, on the other hand, are very frequent and usually involve the wrist joint. Fractures of the wrist are among the most numerous and interesting of all injuries.

Cotton classifies them as follows:—

(a) Colles' fracture.
(b) Reversed Colles'.
(c) Fractures of both bones, low.
(d) Epiphyseal separation.
(e) Green stick fracture of both bones.
(f) Fracture of the ulnar styloid alone.

Carpal fractures:—

(a) Fractures of the scaphoid bone.
(b) Scaphoid fracture with semilunar luxation.
(c) Fracture of other carpal bones.

Fractures about the wrist are usually accompanied by luxation of other bones.

Colles' Fracture. — Before describing Colles' fracture, it may be well to call attention to the relative position of the radial and ulnar styloids, that of the radius being normally about a quarter of an inch lower than that of the ulna. In pronation the head of the ulna is felt, while in supination the styloid is felt. The relative position of the two styloids is one of the most important features in the diagnosis of injuries of the wrist.

In Colles' fracture the radius is broken at some point, not higher than one and a half inches above the wrist, with a dislocation of the wrist backward on the forearm. The break is entirely through the bone and may be transverse or diagonal, according to the direction

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from which the fracturing force is received. The relative position of the styloids will be altered, whether the ulnar styloid is broken or not, and the wrist will be widened. The backward luxation of the wrist produces the "silver fork" deformity. In "Reversed Colles'," the hand is luxated forward and upward. In no other wrist fracture is the relation between them disturbed, except in fracture of the radial styloid alone. These styloids can practically always be felt, even with great swelling of the wrist. "Barton's fracture" is a splitting off of the posterior articular of the radius, commencing from a quarter of an inch above the lower end and extending diagonally down into the joint, with a backward dislocation of the wrist. "Reversed Barton's," on the contrary, is a splitting off of the anterior radial surface, with a forward dislocation. Epiphyseal separation is said to resemble Colles' fracture in its symptoms. Personally, I have never seen a case. By careful attention to the foregoing details, the above fractures can readily be recognized, although the diagnosis should be verified by the x-ray. If the x-ray is used only once, it is better to defer the picture until after the dressing, so that it may show whether or not the fragments have been placed in the proper apposition. Colles' fracture is caused usually by a fall on the palm of the hand, although any direct violence, such as cranking an automobile, may act as a cause. There is often impaction of the fragments and rotation or other displacement of the hand.

Reduction of the dislocation should be done as soon as possible after the injury. An anaesthetic is generally necessary, so as to overcome the involuntary contraction of the muscles, as well as to relieve pain, although prolonged anaesthesia is unnecessary. Impaction of the fragments should be broken up in the majority of the cases, and the dislocation reduced.

After the proper reduction, the fragments will usually remain in place, although the reduction should be maintained by light splints—preferably a light splint, extending from just above the middle of the forearm to the heads of the metacarpal bones on the back, and one of similar length on the front of the arm, cut out to avoid pressure on the thenar muscles. The posterior one should be cut also to avoid pressure on the head of the ulna. Both should be covered with cotton wadding and a piece of felt placed in the palm and above the wrist. The splints should be held lightly together by three pieces of adhesive to avoid undue pressure and allow for swelling. The splints should be not quite as wide as the arm and the tape should adhere to the arm so as to hold the splints in place. The whole should be wrapped in a two-inch bandage, snugly, but not too tightly applied. This dressing can be easily removed for inspection, which should usually be done on the third day. I sometimes use a light plaster cast, and split it down the entire length on the ulnar side, to allow for the swelling. This can be done very easily just before the plaster is dry. These dressings can be used for all fractures of the middle or lower forearm. The hand is placed in the semi-prone position to maintain parallelism of the bones. Care should be taken to avoid abduction of the hand.

A sling should be worn just long enough to hold the hand a little higher than the elbow. The hand should pass entirely through the sling as its weight will help to avoid abduction.

"Green stick" fractures are found chiefly in young patients and usually from two to three inches above the wrist, and are caused by direct force. Care should be taken not to fracture them entirely, but careful, steady pressure will reduce the deformity, as the bones of the young bend very easily. A light splint on the palmar aspect of the forearm will retain them in the proper position.

Among the complications of wrist fractures, fracture of the scaphoid may occur. This fracture is caused by a fall on the hand while it is in the prone position, the bone being caught between the other carpal bones and the articular surface of the radius and broken at its neck, the fragments interfering with the movements of the wrist. A diagnosis of this injury is possible, but not easy without the x-ray. If there is much interference with these movements, the treatment is removal of the offending fragments. This injury is often complicated by fracture or luxation of other carpal bones. The hand is put up in the same dressing as in Colles' fracture. The dressing should be removed early and passive motion done.

512 Taylor Building.

CYSTITIS.*

By R. S. FITZGERALD, M. D., Richmond, Va.

Cystitis is an inflammation of the bladder due to some form of germ infection. In accordance with the clinical course it may be classified as acute or chronic.

Etiology.

The causes are predisposing and exciting. The predisposing causes are those which favor retention and congestion. A normal bladder which is evacuated at regular intervals is not easily infected. Even though germs are carried into the bladder by dirty instrumentation, the healthy tissue is sufficient to prevent penetration and multiplication of micro-organisms. The retention of urine, which causes the congestion, is in proportion to the acuteness of the retention. A sudden distention of the bladder is more favorable to congestion than a gradual distention. Trauma may be due to a jar, contusion, laceration, instrumentation, stone or foreign body. The urine may be too acid or too alkaline or a very low or very high s. p. may be a cause of congestion. Various drugs may cause cystitis, as turpentine, balsams, alcohol or arsenic. Cardiac weakness and degeneration of the vessels in the aged, combined with enlarged prostate, thereby cause retention of urine, which results in cystitis.

The exciting cause of cystitis is local infection due to catheterization, etc., or the germs may enter the bladder by the kidneys, lymph channel or blood, or pass directly from the rectum, in cases of constipation, hemorrhoids or any diseased condition of the rectum.

Cystitis usually affects the trigonum, the urethral orifice, the ureteral openings. The urine is usually acid and contains pus and epithelium from the bladder. In interstitial cystitis, the inflammation extends more deeply, ridges in the bladder may be felt with the sound, also abcesses may be found in the walls. Symptoms of cystitis are pyuria, frequent urination, pain, muscular spasm, haematuria and fever.

Diagnosis.

Frequent urination, pain, and pus in the urine are alone not enough to justify a complete diagnosis of cystitis. With the above symptoms present, or some of them at any rate, when the bladder is tender in the rectal and suprapubic region, and the urine passed in three portions shows the greatest amount of pus in the last portion, and when the flat bladder epithelium is very abundant and injections show the bladder is hypersensitive to tension, then you may be positive of your diagnosis. In many cases, the usual symptoms are not present and the diagnosis is made by the use of the cystoscope examination.

Prognosis.

If there is no lesion which tends to prolong vesical congestion, the prognosis of acute cystitis is good. Of course, stricture of the urethra, stone, or enlarged prostate may cause inflammation, and removal of either of these will relieve the condition. Cystitis, due to rough instrumentation or gonorrhoea, usually runs a rapid and favorable course. It happens occasionally when there is anything which interferes with the emptying of the bladder normally that an inflammation is set up. The prognosis of chronic cystitis is less favorable depending mainly upon the cause.

Treatment.

From what is known to cause cystitis, it is plain that prevention of the disease depends upon the avoidance of local congestion and the entrance of germs into the bladder. It is not absolutely necessary for patients with cystitis to remain in bed as it seems to increase the congestion rather than lessen it. Fresh air, a certain amount of exercise daily, such as walking, riding a bicycle, horse, etc., according to the strength of the patient are helpful.

The diet should be so regulated as to prevent indigestion. Even slight digestive disturbances will render the urine irritating. The various lithia waters are used with good results. It is not so much the kind of water but the quantity of pure water which does the work, constantly flushing the bladder. The skin should be carefully looked after. A daily bath is very essential.

The bowels should move at least once daily, or even twice, to prevent any congestion or obstruction as it is often by constipation that the colon bacilli get into the bladder and set up considerable trouble. Small doses of Epsom salt or any aperient water often have the desired effect, or occasionally an enema may be given.

*Read before a meeting of the Richmond Academy of Medicine and Surgery.

Getting the body chilled or feet wet should be carefully guarded against.

In order to render the urine bland or mildly antiseptic, we give urotropin, salol or boric acid about four times daily.

Acute cystitis, such as is caused by cantharides, etc., is treated by hot baths, rest in bed, elevation of the pelvis and thorough evacuation of the bowels by salines and cold enema of salt water.

For the relief of frequent and painful desire to urinate, we use suppositories belladonna (Gr. 1) and opium (Gr. ½). In certain cases of gonorrhoeal prostatic cystitis, where the inflammation is limited to the prostatic urethra and the portion of the trigonum nearest the vesical orifice, an instillation of ten drops of a five per cent (5%) solution of silver nitrate will give almost instant relief.

The bleeding in acute inflammation is slight and relieves or lessens congestion and requires no special treatment.

Treatment of chronic cystitis will not respond unless the predisposing causes are removed, such as urethral obstructions due to stone, tumor, etc. Usually, if the predisposing causes are removed and the bladder put at rest, the urine rendered unirritating, stimulant and slightly antiseptic so that ammoniacal fermentation does not take place, the symptoms rapidly improve and the patient recovers.

Instillations are especially recommended when the inflammation is very severe, at or near the neck of the bladder. At first these instillations may cause tenesmus and pain, but are shortly followed by marked relief.

The solution most frequently used for this purpose is nitrate of silver, a maximum strength of five per cent (5%). It is always advisable to begin with a weak solution and increase to a 5%. These instillations are used every second and third day according to the reaction they cause. There are many other solutions which may be used with good results as well as medicine internally to render the urine bland and antiseptic as possible.

Recently, I have had a very interesting case to come under my observation. This case was referred by a doctor here in the city with a history as follows:

Female, married, about thirty-five years old, one child, history practically negative. She was suffering, as she expressed it, with a burning, bearing down sensation and constant desire to urinate and usually passed only a few drops at a time. On cystoscopic examination I found the mucosa of the bladder somewhat congested, the ureteral openings were normal, both kidneys catheterized and specimen normal, the trigone was very red and congested all the way through.

I irrigated the bladder with normal saline solution and then used the silver sol. 2% at first, then gradually increased to 5% with practically no results, at the same time gave her medicines by mouth, kept bowels open and regulated the diet. She drank six or eight glasses of water daily. The general condition of the bladder improved but the constant desire to void did not improve.

My attention was called to an article in the *Journal of Obstetrics and Gynecology* written by a doctor in New York. I wrote him and he said he had had several similar cases and had treated them by injecting the trigone. I immediately ordered the needle, which was about sixteen inches long, and had to be attached to a hypodermic syringe and used through an endoscope. The solution used was a 2½% solution of quinine and urea hydrochloride with a 1 to 1000 sol. of adrenalin about a dram to the oz. of solution, and a little methylene blue to color solution. This was injected into the trigone starting at one ureteral orifice and infiltrating the parts across to the opposite side and then another line, using about 10 c.c.: I then let her rest for a week and repeated the same treatment starting where I left off before.

I am glad to say the woman improved wonderfully, could retain her urine several hours, general health had improved, and she had gained about ten pounds. She was taken to the hospital to have some pelvic work done, which was the understanding as soon as she could retain her urine.

I saw her a few days ago and she said she felt much better, had had practically no trouble, and would come back for me to examine her as soon as she was well enough to travel.

The man in New York claims to have had instant relief from the first treatment.

400 East Franklin Street.

"The more you have the more you want" doesn't apply when a fellow hears that triplets have been brought to his home.—(Selected.)

Public Health

In The Tuberculosis Field.

THE SPAHLINGER TREATMENT.

Latest among announced treatments for tuberculosis, hailed in enthusiastic terms by the lay press as "a medical discovery of supreme importance to the whole world", is the Spahlinger cure. This is a serum prepared by M. H. Spahlinger of Switzerland. It has been the subject of a report to the French Academy of Science by Professor D'Arsova, on behalf of the young Swiss discoverer. The French Academy took no action on the report, because the discoverer did not specify the exact nature of the vaccines he has prepared. Some press reports, which went so far as to assert that the British Ministry of Health was conducting a campaign to gain governmental adoption of the Spahlinger method, have not been confirmed at this writing, and personal correspondece with London physicians tends to discredit early reports that Spahlinger has found a specific of value in all cases of tuberculosis.

Writing under date of March 30, 1921, Dr. C. H. Colbeck, at one time connected with the London Hospital for Diseases of the Chest, says: "I treated a number of cases in 1914 with M. Spahlinger's serum, with varying results. I have treated no cases since then. Spahlinger tells me that he has improved on his material since 1914, but I have had no experience of it."

The Spahlinger "cure" comes in the long train of "chemotherapeutic agents" which have been given world-wide publicity from time to time, each announcement claiming for its day success in the search that has been vain, so far as we now know, from the days of Hippocrates and Galen. An excellent summary of the difficulties of the search for a specific in tuberculosis was given in an editorial in the *Journal of the American Medical Association* (July 24, 1920) which, among other statements, contained the following:

"The trouble with the chemotherapy of tuberculosis is that it is too difficult and especially too slow. Chemotherapeutic research is built up in slow stages at the best, but the slowness and the difficulty are augmented many times when the tubercle bacillus is the subject. First comes the determining of the capacity of compounds to inhibit the growth of the tubercle bacillus in cultures—and the tubercle bacillus is not the easiest of organisms to handle, especially in incompletely equipped laboratories. Then must be determined what the capacity is to kill bacilli, which requires most meticulous technic, and control by inoculating scores or hundreds of guinea-pigs, which must be watched and studied for months or even for a year in each experiment. Then must follow experimental therapeutics on animals, which means daily work with further hundreds of animals, all under most careful technic and control. Such work as this is by far the most difficult and expensive sort of therapeutic study yet undertaken, requiring not only abundant equipment and resources, but also a co-operating staff of most highly trained bacteriologists, pathologists and chemists, and especially a highly critical direction. It cannot be done by casual investigators in a few months' time with an ordinary laboratory equipment."

Of this subject Paul Lewis has well said: "Certainly it will be a most unfortunate thing for the progress of tuberculosis research if every substance showing interesting properties in the laboratory is immediately rushed to the clinic regardless of consequences. In this situation patience is to be taken more than usually as an evidence of virtue."

B. L. T.

Medical Education

Richmond Selected By Commission As Medical Center.*

The Medical College of Virginia and the medical department of the University of Virginia will be consolidated and the united institutions will be located in Richmond, if the final report of the commission on medical education in Virginia is adopted by the General Assembly. Following prolonged sessions of the commission at the Westmoreland Club, the body, May 2, completed its labors, and the report will be handed to Governor Davis as soon as it is put into shape by the clerk of the commission.

*Report as given to newspapers and published in Richmond Times-Dispatch, May 3, 1921.

At its final session, held in Richmond, May 2, Dr. Theodore Hough, of Charlottesville, member of the committee, was authorized to issue the following statement:

UNANIMOUS ON CONSOLIDATION.

"At its final session, held in Richmond, May 2, the Commission on Medical Education in Virginia adopted a majority report favoring the location of the single State-supported medical school in Richmond, this school to be the medical department of the University of Virginia. On the policy of consolidation and of making the combined school the medical department of the University of Virginia the commission was unanimous. On the question of location five of the nine members of the commission voted in favor of Richmond. One member of the commission voted against the majority report, asking for a survey by an outside agency, but not expressing a preference for location."

The decision of the commission was not reached until every phase of the situation had been fully discussed. Many meetings were held, and debate was full and frank. Friends of the university, who wanted the institution located in Charlottesville, maintained their stand throughout. The member of the body who declined to vote for the location at either place, was as insistent upon his contention that disinterested experts should make a comprehensive survey of the situation before final action, while the Richmond advocates stuck to their original declaration that, owing to its location, its clinical advantages and the large number of specialists located here, no better nor more ideal site could be selected.

SUGGESTION OFFERED IN 1905.

The suggestion of a consolidation of interests was first offered in 1905. Nothing definite was done for a number of years. In 1913 the question again arose, and it was practically decided that the consolidation should become effective, with Richmond as the location of the college. The Legislature declined to act, however, and not until 1920 did the question again come to a head. In his message to the General Assembly on January 14, 1920, Governor Davis recommended that the two State-aided medical schools in Virginia be consolidated. The large sum of money appropriated annually to the two institutions called for co-ordination of interests both from the standpoint of economy and efficiency. Later in the session of the General Assembly a bill was passed providing for the formation of a commission. That body began to function shortly after the adjournment of the Legislature, and a number of meetings were held and lengthy discussions were indulged in. Public sentiment was aroused in various localities, and pressure was brought to bear from various interests.

The report of the commission will be reviewed by Governor Davis within the next thirty days. Under the act of the Assembly creating the commission, the Governor must submit the report to the board of the Medical College of Virginia and that of the medical department of the University. These bodies will, in turn, report back to the Governor with their recommendations, and upon this the Governor will report to the General Assembly next year.

BILL PRESENTED BY HALL.

The bill creating the commission was presented by Delegate Wilbur C. Hall, of Loudoun, and adopted, the Senate concurring in the action of the House. The House named two members, the Senate two and one was taken from the University of Virginia faculty and one from the Medical College of Virginia and another from the Virginia Polytechnic Institute and two from the medical profession at large. The composition of the commission is as follows: Wilbur C. Hall, of Loudoun, and Dr. W. D. Prince, of Sussex, on the part of the House; Senator M. B. Booker, of Halifax, and Senator J. B. Woodson, of Amherst, on the part of the Senate; Dr. Stuart McGuire, of the Medical College of Virginia; Dr. Theodore Hough, of the University of Virginia; Dr. E. L. Kendig, of Victoria, and Dr. Beverley Tucker, of Richmond, from the medical profession at large, and Julian P. Burruss, of the Virginia Polytechnic Institute.

Soon after the formation of the commission there began a series of hearings, with the most distinguished educators and men trained in the work of enlarging schools, summoned to state their views on the subject. The University of Virginia wanted the medical school located there. The city of Richmond, long noted as a medical center, made a determined fight to retain the school here. The commission considered all the available data on the subject, they listened to presentation of the merits of the two places, and they spent many hours in the effort to reach a conclusion.

One of the factors for the merging of the schools was the fact that neither could get the benefit of the immense fund that would be available for the advancement of medical science—the Rockefeller Foundation and other funds that might be had if there were but one medical school in the State.

University's Claim Strong.

On behalf of Charlottesville argument was made to have the medical school located near the University of Virginia. The claims of the University were strong, and it was pointed out that the prestige of the University was such that it would carry weight and serve to attract students. Then, too, the students would have a chance to imbibe the general educational atmosphere of the institution founded by Thomas Jefferson.

Richmond contended that here the students could be accommodated in every way; that the abundance of clinical material, the accessibility of the city, the splendid buildings owned by the State, the admitted unequalled hospital facilities, the presence of many of the ablest professional men in all branches of medicines, the associated courses, the long and recognized standing of the Medical College of Virginia—in fact, Richmond and her great and interesting history from every viewpoint were presented.

Meetings were held at Charlottesville and in Richmond. The members of the commission wrestled with the subject from every angle.

Various Proposals Made.

Various propositions were made—to have the course divided between this city and the University of Virginia—to teach the first two years there and to make this city the finishing of the course. It was agreed almost at the outset that the school should be under the direction of the University of Virginia—that it should be the medical department of the university. The suggestion that the four-year term be divided met with little favor.

In his message delivered before the General Assembly on January 14, 1920, Governor Davis recommended the establishment of one institution, on the standpoint of both efficiency and economy. Following this recommendation, the General Assembly adopted a bill providing for the formation of the commission. Governor Davis, on this subject, said:

Governor Davis's Message.

"There are two State-aided medical schools in Virginia. There should be, as in other States, but one. The Medical College of Virginia receives $70,000 each year, and the University of Virginia $96,175 each year for the biennium period. The best thought to be had upon the subject is that these State-aided institutions operate to their own detriment in the same sphere of usefulness, and appropriation made by the State should be to one institution, rather than to be divided between the two.

"I am impressed, from the standpoint of efficiency and economy of administration, that it would be well for the Legislature to take cognizance of the condition to which I have referred, and that in aid of the adoption by the State of a broad constructive policy in the selection of a single medical school, which will alone receive the support of the State, a committee of nine be authorized to investigate the advisability of having one State-aided medical school in Virginia rather than two, and assisted by trained experts in medical education, without undue expense to the State, to study medical education in Virginia and upon the basis of such study and after all the facts and conditions are understood, to make to the Governor, for transmission to the General Assembly, such recommendations as they may think wise, to the end that medical education in Virginia be unified and the whole situation be made as efficient and logical as possible.

"The committee to consist of nine members, should be appointed—three members by the Senate, three by the House of Delegates, and three by the Governor, all to serve without compensation.

"A report based upon scientific research would be authoritative and enable the General Assembly to proceed with wisdom, should the institutions not act, upon the conclusions reached by the expert advice secured by the committee."

Proceedings of Societies

Roanoke Academy of Medicine.

At the regular meeting of the Academy, April 18, Dr. Kennon Dunham, of Cincinnati, one of the best recognized authorities in this country on tuberculosis, and Dr. A. L. Gray, president of the Medical Society of Virginia,

and one of the leading roentgenologists in the South, read papers of great interest. Members of the Southwest Virginia Medical Society and of the Mercer County, W. Va., Medical Society, as well as a number of out of town physicians, were invited to attend. There was an attendance of over one hundred, including members and guests. A buffet luncheon was served following the meeting.

Wise County Medical Society.

A meeting of this Society was held April 26 at the Norton, Va., Hospital, at which time Dr. Joseph A. McGuire, of Norton, was elected president for the ensuing year, and Dr. C. B. Bowyer, of Stonega, was re-elected to the position of secretary-treasurer.

The Dinwiddie County Medical Society,

At a meeting held April 21, elected the following officers: President, Dr. Jos. M. Burke, Petersburg; vice-president, Dr. Geo. W. Fultz, Butterworth; and secretary-treasurer, Dr. Wm. C. Powell, Petersburg.

The Va. Section, Clinical Congress, American College of Surgeons

Held its first annual meeting in Richmond, April 14-15, with the Jefferson Hotel as headquarters. Officers in charge of the Richmond meeting were Dr. A. Murat Willis, Richmond, as chairman; Dr. Charles R. Robins, Richmond, secretary. These with Dr. Southgate Leigh, Norfolk, as counselor, formed the Virginia Executive Committee. The local committee on arrangements was composed of Drs. J. Shelton Horsley, Robt. C. Bryan and C. C. Coleman. Forty-five members, five applicants for membership and seven out-of-State visitors were present, which was an excellent showing, as there are at this time only 62 members of the College in Virginia.

There were three special features that were emphasized: a hospital conference, a public meeting for the laity, and the clinics. At the hospital conference standardization was discussed and its advantages dwelt upon. The general way in which efforts of the College in this particular work have been supported by our hospitals and the rapid advancement they have made in complying with the requirements are matters of favorable comment. Standardization has been placed upon a sound foundation and the necessity for all hospitals to conform is becoming very apparent.

At the public meeting an address was made by Hon. H. St. George Tucker, after which the work of the College and its relation to the public, the early recognition of cancer, the standardization of hospitals, and various other matters were discussed in popular style by good speakers and the interest that the public has in these matters brought home to the audience, after which Dr. Douglas Freeman, Editor of the News-Leader, closed the meeting in his own inimitable style.

Of chief interest to the members were the clinics that were held in the various hospitals. The members were divided into small groups by a system of tickets and were thus distributed to each of the hospitals.

The clinics were designed to show the interdepending work of the staff in all of its various departments both in the study of cases and methods of arriving at diagnosis and also in treatment. All of the hospitals showed excellent team work.

Altogether this first meeting may be considered a great success and fittingly inaugurated the annual meetings which will hereafter be held. The next meeting will be held in Norfolk and the following are the officers who will have it in charge: Dr. Lomax Gwathmey, Norfolk, chairman; Dr. J. L. Rawls, Norfolk, secretary, and Dr. S. S. Gale, Roanoke, counselor.

Distinguished visitors from a distance included Drs. Victor C. Vaughan, of the University of Michigan, Ann Arbor; Dean Lewis, of Chicago; Charles A. Hamann, of Cleveland; James L. Smith, of Hospital Survey Department, American College of Surgeons; Judge Harold M. Stephens, Director of Hospital Activities, American College of Surgeons, and Rev. C. B. Moulinier, S. J., President Catholic Hospital Association.

Correspondence

An Appreciation From Abroad.*

Warsaw, March 24, 1921.

To the Editor:

I am very thankful to you for sending me the journal to Europe. One must be far away from home to realize the joy of reading one's own State medical paper.

*Dr. Newman was connected with the City Health Department of Danville, Virginia, but volunteered for service in Poland, and sailed last Fall. He is a member of the Medical Society of Virginia.

The Medical Unit of Dr. Plotz, with which I came abroad, was reorganized in Paris in conjunction with the Hoover Relief Mission, American Red Cross, and the League of Red Cross Societies, as a Medical Commission to Poland. The commissioners were assigned to various districts as Medical Directors of the Child Relief Campaign. I am the Medical Director for Congress Poland. My functions are to carry on investigations, surveys and campaigns, pertaining to child welfare. Tuberculosis is our greatest problem.

I trust that your journal will reach me regularly.

SAMUEL NEWMAN.

Secretary's Announcement

Go to Boston, June 6th-10th.

An especially attractive route to Boston for the meeting of the American Medical Association is provided by the Southern Railway and the Chesapeake Steamship Company via West Point. Trains leave the Main Street Station, Richmond, Va., daily, except Sunday, at 5.10 P. M., connecting with palatial steamers at West Point and arriving at Baltimore the following morning at 7 A. M. Approximately two hours is afforded in Baltimore for an easy connection with the Pennsylvania Railway through train to Boston, arriving at your destination about 8 P. M. A trip up Chesapeake Bay at this season of the year is very attractive and offers busy physicians an opportunity for rest.

The detailed schedule of this line is given in the advertising columns of this issue. The Secretary-Treasurer will be glad to make reservations for any members of the State Society who may want to go to Boston by this route or by way of the Merchants and Miners all-water route from Norfolk to Boston.

The Truth About Medicine

During March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Abbott Laboratories:
Tablets Acriflavine—Abbott 0.46 grain.

Armour & Co.:
Ampoules Pituitary Liquid—Armour 0.5 cc.

Hynson, Westcott & Dunning:
Sterile Ampoules of Benzyl Benzoate—H. W. D.

E. R. Squibb & Sons:
Arsphenamine—Squibb.
Neoarsphenamine—Squibb.
Sodium Arsphenamine—Squibb.

Book Announcements

A Compend of Human Physiology. Especially adapted for the use of medical students. By ALBERT P. BRUBAKER, A. M., M. D., Professor of Physiology and Medical Jurisprudence, Jefferson Medical College, Philadelphia. 15th edition. 264 pages with 26 illustrations. Philadelphia. P. Blakiston's Son and Company. 1921. 16mo. Cloth. Price, $2.00 net.

New and Nonofficial Remedies, 1921. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association, on January 1, 1921. Chicago. American Medical Association, 535 North Dearborn Street. Paper. 418-xxxii pages. Price, $1.50 postpaid. Supplements, as issued from time to time during the year, free to purchasers.

Johns Hopkins Hospital Reports. Vol. XX, Fasciculus III. Baltimore. Johns Hopkins Press. 1921. Paper. 64 pages and illustrations.

Tuberculosis of Children. Its Diagnosis and Treatment. By PROFESSOR DR. HANS MUCH, Director of the Department for the Science of Immunity and for the Research of Tuberculosis at University of Hamburg, Germany. Translated by DR. MAX ROTHSCHILD, Medical Director of California Sanatorium for Treatment of Tuberculosis, San Francisco and Belmont, Cal. New York. The Macmillan Company. 1921. 8vo. Cloth. 156 pages.

Birth Statistics for the Birth Registration Area of the United States. 1919. Fifth Annual Report. By Department of Commerce, Bureau of the Census, Sam. L. Rogers, Director. 1921. Price 35 cents. Sold only by the Superintendent of Documents, Government Printing Office, Washington, D. C.

A Symposium of Opinions from Prominent Men on "The Pace That Kills." By A. L. GOLDWATER, M. D., Director Research Dept., Medical Review of Reviews. New York. Paper. 27 pages.

Practical Chemical Analysis of Blood. A Book Designed as a Brief Survey of this Subject for for Physicians and Laboratory Workers. By VICTOR CARYL MYERS, M. A., PH. D., Professor of Pathological Chemistry, New York Post-Graduatee Medical School and Hospital. Illustrated. St. Louis. C. V. Mosby Company. 1921. Cloth. 121 pages. 8vo. Price $3.00.

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Editorial

A Voice From The Past.

As illustrative of the similarity of requirements in manners and professional ethics, essential for the physician of the past and present, we quote from a lecture on "The Duties of a Physician," delivered by Dr. Benjamin Rush, professor of the Institute and Practice of Medicine and of Clinical Practice, in the University of Pennsylvania. This lecture was delivered before the student body on February 7, 1789.

"I shall conclude our course of lectures, by delivering to you a few directions for the regulation of your future conduct and studies, in the line of your profession.

"I. * * * * * * * *.

"II. Avoid singularities of every kind in your manners, dress, and general conduct. Sir Isaac Newton, it is said, could not be distinguished in company, by any peculiarity, from a common well bred gentleman. Singularity, in any thing, is a substitute for such great or useful qualities as commond respect; and hence we find it chiefly in little minds. The profane and indelicate combination of extravagant ideas, improperly called wit, and the formal and pompous manner, whether accompanied by a wig, a cane, or a ring, should be all avoided, as incompatible with the simplicity of science, and the real dignity of physic. There is more than one way of playing the quack. * * * * *

"III. It has been objected to our profession, that many eminent physicians have been unfriendly to Christianity. If this be true, I cannot help ascribing it in part to that neglect of public worship, with which the duties of our profession are often incompatible; for it has been justly observed, that the neglect of the religious and social duty generally produces a relaxation, either in principles or morals. Let this fact lead you, in setting out in business, to acquire such habits of punctuality in visiting your patients, as shall not interfere with acts of public homage to the Supreme Being. * * * * I believe Christianity places among its friends more men of extensive abilities and learning in medicine, than in any other secular employment. * * * *

"IV. Permit me to recommend to you a regard to all the interests of your country. The education of a physician gives him a peculiar insight in the principles of many useful arts, and the practice of physic favors his opportunities of doing good, by diffusing knowledge of all kinds. It was in Rome, when medicine was practised only by slaves, that physicians were condemned by their profession 'mutam exercere artem.' But in modern times, and in free governments, they should disdain an ignoble silence upon public subjects. The American Revolution has rescued physic from its former slavish rank in society. For the honor of our profession it should be recorded, that some of the most intelligent and useful characters, both in the cabinet and the field, during the late war, have been physicians. * * * * *

"V. Let me advise you, in your visits to the sick, *never* to appear in a hurry, nor to talk of indifferent matters, before you have made the necessary inquiries into the symptoms of your patient's disease.

"VI. Avoid making light of any case, 'Respice finem' should be the motto of every indisposition. There is scarcely a disease so trifling, that has not directly or indirectly, proved an outlet to human life. This consideration should make you anxious and punctual in your attendance upon every acute disease, and keep you from risking your reputation by an improper or hasty diagnosis.

"VII. Do not condemn or oppose, unnecessarily, the simple prescriptions of your patients. Yield to them in matters of little consequence, but maintain an inflexible authority over them in matters that are essential to life.

"VIII. Preserve, upon all occasions, a com-

posed or cheerful countenance in the room of your patients, and inspire as much hope of a recovery as you can, consistent with truth, especially in acute diseases. The extent of the influence of the will over the human body has not yet been fully ascertained. I reject the futile pretensions of Mr. Mesmer to the cure of diseases, by what he has absurdly called animal magnetism. But I am willing to derive the same advantages from his deceptions, which the chemists have derived from the delusions of alchemists. The facts which he has established clearly prove the influence of the imagination, and will, upon diseases. Let us avail ourselves of the handle which those faculties of the mind present to us, in the strife between life and death. I have frequently prescribed remedies of doubtful efficacy in the critical stages of acute diseases, but never till I had worked up my patients into a confidence, bordering upon certainty, of their probable good effects. The success of this measure has much oftener answered, than disappointed my expectations; and while my patients have commended the vomit, the purge, or the blister, which was prescribed, I have been disposed to attribute their recovery to the vigorous concurrence of the *will* in the action of the medicine. Does the will beget insensibly to cold, heat, hunger, and danger? Does it suspend pain, and raise the body above feeling the pangs of Indian tortures? Let us not then be surprised that it should enable the system to resolve a spasm, to open an obstruction, or to discharge an offending humour. I have only time to hint at this subject. Perhaps it would lead us, if we could trace it fully, to some very important discoveries in the cure of diseases.

"IX. Permit me to advise you, in your intercourse with your patients, to attend to that principle in the human mind, which constitutes the association of ideas. A chamber, a chair, a curtain, or even a cup, all belong to the means of life or death, accordingly as they are associated with cheerful or distressing ideas, in the mind of a patient. But this principle is of more immediate application in those chronic cases which affect the mind. Nothing can be accomplished here, till we produce a new association of ideas. For this purpose a change of place and company are absolutely necessary. But we must sometimes proceed much further. I have heard of a gentleman in South Carolina, who cured his fits of low spirits by changing his clothes. The remedy was a rational one. It produced at once a new train of ideas, and thus removed the paroxysm of his disease.

"X. Make it a rule never to be angry at any thing a sick man says or does to you. Sickness often adds to the natural irritability of the temper. We are, therefore, to bear the reproaches of our patients with meekness and silence. It is folly to resent injuries at any time, but it is cowardice to resent an injury from a sick man, since, from his weakness and dependence upon us, he is unable to contend with us upon equal terms. You will find it difficult to attach your patients to you by the obligations of friendship or gratitude. You will sometimes have the mortification of being deserted by those patients, who owe most to your skill and humanity. This led Dr. Turner to advise physicians never to choose their friends from among their patients. But this advice can never be followed by a heart that has been taught to love true excellency, wherever it finds it. I would rather advise you to give the benevolent feelings of your hearts full scope, and to forget the unkind returns they will often meet with, by giving to human nature—a tear.

"XI. Avoid giving a ptaient over in an acute disease. It is impossible to tell in such cases where life ends, and where death begins. Hundreds of patients have recovered, who have been pronounced incurable, to the great disgrace of our profession. I know that the practice of predicting danger and death, upon every occasion, is sometimes made use of by physicians, in order to enhance the credit of their prescriptions, if their patients recover, and to secure a retreat from blame, if they should die. But this mode of acting is mean and illiberal. It is not necessary that we should decide with confidence, at any time, upon the issue of a disease.

"XII. A physician in sickness is always a welcome visitor in a family; hence he is often solicited to partake of the usual sign of hospitality in this country, by taking a draught of strong liquor, every time he enters into the house of a patient. Let me charge you to lay an early restraint upon yourselves, by refusing to yield to this practice, especially in the *forenoon*. Many physicians have been innocently led by it into habits of drunkenness. You will be in the more danger of falling into this vice, from the great fatigue and inclemency of the

weather to which you will be exposed in country practice. But you have been taught that strong drink affords only a temporary relief from those evils, and that it afterwards renders the body more sensible of them.

"XIII. I shall now give some directions with respect to the method of charging for your services to your patients.

"When we consider the expense of a medical education, and the sacrifices a physician is obliged to make of ease, society and even health, to his profession; and when we add to these, the constant and painful anxiety which is connected with the important charge of the lives of our fellow-creatures, and, above all, the inestimable value of that blessing which is the object of his services, I hardly know how it is possible for a patient sufficiently and justly to reward his physician. But when we consider, on the other hand, that sickness deprives men of the means of acquiring money; that it increases all the expenses of living; and that high charges often drive patients from regular-bred physicians to quacks; I say, when we attend to these considerations, we should make our charges as moderate as possible, and conform them to the following state of things.

"Avoid measuring your services to your patients by scruples, drachms, and ounces. It is an illiberal mode of charging. On the contrary, let the number and *time* of your visits, the nature of your patient's disease, and his rank in his family or society, determine the figures in your accounts. It is certainly just, to charge more for curing an apoplexy, than an intermitting fever. It is equally just, to demand more for risking your life by visiting a patient in a contagious fever, than for curing a pleurisy. You have likewise a right to be paid for your anxiety. Charge the same services, therefore, higher, to the master or mistress of a family, or to an only son or daughter, who call forth all your feelings and industry, than to less important members of a family and of society. If a rich man demand more frequent visits than are necessary, and if he impose the restraints of keeping to hours, by calling in other physicians to consult with you upon every trifling occasion, it will be just to make him pay accordingly for it. As this mode of charging is strictly agreeable to reason and equity, it seldom fails of according with the reason and sense of equity of our patients. Accounts made out upon these principles are seldom complained of by them. I shall only remark further upon this subject, that the sooner you send in your accounts after your patients recover, the better. It is the duty of a physician to inform his patient of the amount of his obligation to him at least *once* a year. But there are times when a departure from this rule may be necessary. An unexpected misfortune in business, and a variety of other accidents, may deprive a patient of the money he had allotted to pay his physician. In this case, delicacy and humanity require, that he should not know the amount of his debt to his physician, till time had bettered his circumstances.

"I shall only add under this head, that the poor of every description should be the objects of your peculiar care. Dr. Boerhaave used to say, 'they were his best patients, because God was their paymaster.' The first physicians that I have known have found the poor the steps, by which they have ascended to business and reputation. Diseases among the lower class of people are generally simple, and exhibit to a physician the best cases of all epidemics, which cannot fail of adding to his ability of curing the complicated diseases of the rich and intemperate. There is an inseparable connection between a man's duty and his interest. Whenever you are called, therefore, to visit a poor patient, imagine you hear the voice of the good Samaritan sounding in your ears, 'Take care of him, and I will repay thee.'

"* * * * may the blessings of hundreds and thousands, that were ready to perish, be your portion in life, your comfort in death, and your reward in the world to come."

News Notes

American Medical Association.

The time for this meeting, June 6-10, is rapidly approaching, and Boston, "The Hub," with its attractive side trips, is always a center of interest for those who visit New England. One of the attractions accessible to doctors who expect to attend from this section of the country, is a water trip, which combines comfort and pleasure. Two of these are available—one an overnight trip from West Point, Virginia, to Baltimore, by the Southern Railway and Chesapeake Steamship Company, where a fast train

may be taken to Boston; the other a thirty-six hours' trip by the Merchants and Miners Line from Norfolk to Boston. Both provide comfortable staterooms and delicious meals. Write for their folders.

Members who contemplate going by rail, should make request at once for Identification Certificates (accompanied by a stamped, self-addressed envelope) to the Secretary of the A. M. A., Dr. Alex. R. Craig, 535 N. Dearborn Street, Chicago, Ill. Be sure to take with you your 1921 membership card. If you have failed to receive it, write for it at once to the same address.

Virginia's delegates to this meeting are Drs. Southgate Leigh, Norfolk; Ennion G. Williams, Richmond, and Jos. T. Buxton, Newport News.

Last, but not least, do not fail to make hotel reservations in advance. Dr. John T. Bottomley, chairman of the Boston Committee on Hotels, will be glad to help you, if you write him care the Boston Medical Library, 8 The Fenway, Boston 17, Mass.

Medical College Finals.

Both of the Virginia medical schools will hold their final exercises before we again go to press and a number of young doctors will be graduated to help fill the gaps made in the medical profession by death and retirements. There are about twenty-five members in the graduate medical classes of each of the schools.

Medical College of Virginia finals will commence with the baccalaureate sermon on May 29; the meeting of the Alumni Association will be held on May 30, and closing exercises will be held on the evening of May 31, at which time Dr. F. W. Boatwright, president of the University of Richmond, will be the orator.

The University of Virginia, Department of Medicine, will hold their exercises in conjunction with those of other graduate schools of the University, beginning May 31. This is the centennial program of the University of Virginia and the exercises will extend over four days. Sir Auckland Geddes, himself a physician and British ambassador to the United States, is to be among the speakers on this occasion.

Married—

Dr. Frank Stoddard Johns, Richmond, and Miss Anne Page, of Hanover County and Richmond, April 30.

Dr. Francis Whittle Upshur and Miss Martha Maury Robinson, both of Richmond, April 20.

Dr. William Pinkney Herbert, Asheville, N. C., and Miss Frances Venable Carrington, daughter of Dr. and Mrs. Charles V. Carrington, of Richmond, April 26.

Dr. E. Wheeler Buckingham, of Lynchburg, Va., who left last Fall for China for medical missionary work, and Miss Bessie Kenniger, of London, England, in Shanghai, China, February 28. They met during the World War and are both now engaged in missionary work in China.

Dr. Richard Ovid Rogers, of Bluefield, W. Va., and Miss Nancy Louise Martin, of Stuart, Va., in Richmond, April 30.

Dr. John Carroll Wiggins, Winston-Salem, N. C., and Miss Inez Hester, May 16.

Dr. Howard Lee Cecil, Baltimore, Md., and Miss Bessie Walker Omohundro, of Northumberland County, Va., April 30.

Dr. Allen Hoyt Moore, Clover, Va., and Miss Faye Allstatt, Kokomo, Ind., March 15.

Doctors Active Workers in Roanoke University Club.

At a recent meeting of the board of directors of the new University Club, in Roanoke, Va., Dr. Joseph T. McKinney was elected president, Dr. Elbyrne Gill secretary-treasurer, and Dr. Harry B. Stone one of the directors of the club.

The North Carolina Medical Society

Held it s annual meeting at Pinehurst, April 26-28, under the presidency of Dr. Thomas E. Anderson, of Statesville, with a registered attendance of about 450. Drs. James K. Hall, Richmond, R. L. Payne and Jas. H. Culpepper, both of Norfolk, attended as delegates from the Medical Society of Virginia. Papers were read by the following Virginia physicians: Drs. Stuart McGuire, J. A. Hodges, Douglas VanderHoof, Beverley R. Tucker, F. M. Hodges, James K. Hall and R. L. Payne.

Dr. Hubert A. Royster, of Raleigh, was elected president; Dr. W. T. Parrott, of Kinston, first vice-president, and Dr. L. B. McBrayer, of Sanatorium, secretary-treasurer. Winston-Salem was selected as the 1922 place of meeting.

The American Association Of Genito-Urinary Surgeons

Held a two days' session in this city, May 2 and 3, with an attendance of between 40 and 50 members. Dr. John H. Cunningham, Jr., of

Boston, presided, and a number of interesting papers were read by men eminent in this specialty. The next meeting is to be held in Washington, D. C., in May, 1922, and the following officers were elected: President, Dr. James Pedersen, New York City; Vice-President, Dr. William E. Lower, Cleveland, O.; Secretary-Treasurer, Dr. Richard G. O'Neil (re-elected), Boston, Mass.; and new members of the Council, Drs. John H. Cunningham, Jr., Boston, and Robert C. Bryan, Richmond. On the first evening of the meeting, a very handsome reception was tendered members of the Association and a number of local doctors by Dr. Robt. C. Bryan, at his residence.

Dr. E. M. Gayle,

Who was for several years connected with Westbrook Sanatorium, this city, is now located at 213 Middle Street, Portsmouth, Va.

Dr. John R. Guerrant,

Of Franklin County, Va., is at present in Davy, W. Va.

Dr. William S. Thayer

Has tendered his resignation as professor of medicine at Johns Hopkins University after a service of slightly over thirty years, his idea being that a younger man should be put in charge of this department. His resignation will be effective July 1, 1921, at which time he will return to private practice.

Hilltop Sanatorium, Danville, To Be Rebuilt.

A campaign was recently held in Danville, Va., to raise $50,000 in three day's time, to maintain and rebuild Hilltop Sanatorium for consumptives, which has done such an excellent work in the five years in which it has been in operation. A feature of the campaign was the extreme generosity of people of humble means. City policemen and firemen made a 100 per cent. subscription. A $1,000 donation was made by John B. Harvie, tobacconist, as a memorial to his father, the late Dr. Lewis E. Harvie.

Dr. and Mrs. E. S. Thompson,

Of Winston-Salem, N. C., were recent visitors in this city.

Move Offices.

Drs. Clifton M. Miller and W. L. Mason, of this city, announce the removal of their offices from 3 West Grace Street, to Stuart Circle Hospital.

The American Medical Editors' Association

Will hold its annual meeting at Hotel Lenox, Boston, Mass., June 6 and 7, under the presidency of Dr. H. S. Baketel, editor of *Medical Times*. This meeting promises to be of advantage to every doctor even remotely interested in medical journalism.

Dr. H. S. Belt,

Who has been ill at his home in South Boston, Va., is now much improved.

Dr. Ira M. Hardy,

Of Kinston, N. C. suffered some minor cuts and bruises in an accident on the Southern Railroad at China Grove, N. C., on April 18.

The Virginia Graduate Nurses' Association

Is to hold its annual meeting in Danville, Va., May 25-27, under the presidency of Miss Thacker, superintendent of Lewis-Gale Hospital, of Roanoke.

Dr. R. E. Booker

Has returned to his home at Lottsburg, Va., after a short visit to Baltimore.

Dr. W. W. Chaffin,

Pulaski, Va., was one of the representatives from the Pulaski Rotary Club to the district convention in Norfolk, Va., about the middle of April. Mrs. Chaffin accompanied him.

The Southern Railway Surgeons' Association

Will hold its annual meeting in Mobile, Ala., May 24, 25 and 26, under the presidency of Dr. W. A. Applegate, of Washington, D. C. As this is a special anniversary meeting of the Association—its twenty-fifth—a large attendance is requested and expected.

Hopewell Hospital.

Application was made early this month for a charter for a new hospital in Hopewell, Va. Drs. D. L. and J. N. Elder, of Hopewell, and H. A. Burke, of Petersburg, are the incorporators, and the capital is fixed at $25,000.

The Valley Medical Association

Is to meet in Staunton, Va., May 26, at 9 a. m. The meeting will adourn at 1 p. m. for lunch and reconvene at 2 o'clock. A large number of papers on timely and interesting subjects have been promised and it is likely that a night session will have to be held. For further information, write at once to the president, Dr. M. J. Payne, Staunton, or to the secretary, Dr. A. C. Byers, Harrisonburg.

Dr. J. Lewis Riggles,

Washington, D. C., has moved his offices

from 1800 K Street to Stoneleigh Court, that city.

Dr. F. S. Givens,

Recently of Dorchester, Va., has moved to Wise, Va., and has formed a partnership with Dr. N. F. Hix, of that place.

Dr. William A. Strole,

Who sometime since made his home in Norfolk, Va., but has recently been in the West, has secured reciprocity with the State of California, and is now practicing in Los Angeles, with offices in the Baker-Detwiler Building.

Dr. W. S. Cox,

Whose address has been Little Plymouth, Va., is now located at Shacklefords, Va.

West Virginia To Have Hospital For Colored Insane.

A 650-acre farm has been purchased in Mason County, West Virginia, as a site for a proposed State hospital for colored insane.

The State Conference Of Charities and Corrections,

At a four days' meeting in Norfolk, Va., in April, elected Albert L. Roper, of the Norfolk City Council, president for the ensuing year, and selected Danville for its 1922 meeting place.

Dr. George Hannah Reese,

Of Petersburg, Va., has been appointed first lieutenant in the Medical Corps of the First Infantry, Virginia National Guard.

Sheppard-Towner Bill Again Introduced.

Predictions are that the Sheppard-Towner maternity and infancy bill will be passed by Congress at an early date. It was passed by the Senate in the last Congress but failed of consideration in the House for want of time.

Recent Visitors in Richmond.

Among Virginia doctors recently visiting in Richmond are: Drs. Richard Mason, The Plains; J. R. Couch, Alberta; C. J. Terrell, Hewlett; Thos. G. Hardy, Farmville; J. M. Holloway, Port Royal; E. H. Connelly, Alberta; Guy M. Naff, North Emporia; F. C. Miller, Cobham; L. R. Stinson, Scottsville; J. N. Clore, Madison; H. L. Mitchell, Callands; J. B. Woodson, Lowesville; E. L. Kendig, Victoria; John Gale, Ivor; J. J. Nelson, Columbia; Theodore Hough, University; R. L. Ozlin, Dundas; H. U. Stephenson, Toano; and the following attending the Virginia Section, American College of Surgeons—Drs. E. T. Hargrave, J. L. Rawls, Southgate Leigh, R. L. Payne, John Winston, Jas. H. Culpepper, Kirkland Ruffin, Chas. J. Andrews, E. E. Feild, Burnley Lankford, A. A. Burke, E. C. S. Talisferro, P. St. L. Moncure, B. R. Kennon, Stanley H. Graves, Israel Brown, all of Norfolk; W. H. Goodwin and Stephen H. Watts, University; C. H. Barlow, Jos. D. Collins, R. L. Corbell and L. A. McAlpine, of Portsmouth; G. K. Vanderslice, Phoebus; Clarence Porter Jones, Jos. T. Buxton and O. T. Amory, Newport News; M. J. Payne, Staunton; Don Preston Peters and Elisha Barksdale, Lynchburg; H. D. Howe, Hampton; Hugh H. Trout and S. S. Gale, Roanoke; J. Coleman Motley, Abingdon; and S. B. Moore, Alexandria.

Dr. A. H. Deekens,

Of Richmond, went to Philadelphia early this month, to join his classmates of the University of Pennsylvania in a dinner they gave on May 7, to an honored member of that class, Rear Admiral Edward R. Stitt, who has recently been appointed surgeon general of the U. S. Navy.

Dr. Elijah White Titus,

A former resident of Loudoun County, this State, but who has been practicing in Washington, D. C., for several years, has been elected to a position on the staff of the Columbia Hospital, in Washington.

Dr. L. H. Gammon

Has announced his candidacy for mayor of Bristol, Va., in the municipal elections on June 7.

Dr. James B. Hackley,

Of Purcellville, Va., has been elected vice-president of the Chamber of Commerce of that town.

Dr. Thomas W. Evans,

Of Concord Depot, Va., has announced himself a candidate for Democratic nomination for the House of Delegates from Campbell County.

Dr. R. J. Payne

Has been appointed to fill a vacancy on the City Council of Fredericksburg, Va.

Model Law Adopted By West Virginia.

West Virginia legislature has just passed the model bill for the registration of births and deaths in that State. This is the forty-fifth state to adopt the law, leaving only Arizona, Nevada and South Dakota to fall in line.

Victory Medal for Ex-Service Men.

Upon request to the Victory Medal Office, 1112 Capitol Street, Richmond, Va., necessary forms for making application for the Victory Medal will be mailed promptly to any ex-service man of this State who desires them. It is necessary for the discharge certificate, or a certified copy thereof, on Form 740-c, A. G. O., in case of enlisted men, and Form 740-d, A. G. O., in case of officers, to accompany the application. When original discharge certificate is sent the office, application is approved, forwarded, and discharge certificate returned to applicant promptly. Applicant should always furnish a complete and correct address.

Do not delay in making application, as offices located in each State are likely to be discontinued in near future, when application will have to be made to the Adjutant General's Office, Washington, D. C., thereby causing a great deal more inconvenience and delay in receiving the medal.

Dr. M. R. Faville

Was recently elected president of the Roanoke Rotary Club.

Dr. Allen W. Freeman,

Formerly connected with the Virginia State Health Department, but now State Health Commissioner of Ohio, was a recent visitor in this city.

Dr. M. C. Oldham,

Lancaster, Va., has been elected one of the delegates from Virginia to the national convention of Modern Woodmen of the World, which is to meet in St. Louis.

The Woman Dental Hygienist,

Who is now doing efficient work among children, does not pull nor fill teeth and consequently is not a terror to them. Instead, she limits her work to cleaning and polishing the teeth above the gums, which, the U. S. Public Health Service states, is most helpful in making the gums healthy and in preventing decay. Twelve states have legalized such practice by women.

T. B. Clinics

Have recently been held in Montgomery, Fluvanna, Tazewell and Prince Edward Counties. Eight hundred and twenty-one persons were examined. Nearly seventy active cases of tuberculosis were found and a number of suspects. In the clinics held at Radford, in Montgomery County, Dr. W. E. Brown, of Catawba Sanatorium, was assisted by Drs. Wilson, Fuqua, Noblin and Howery, of that county. Dr. Wyndham Blanton, of Richmond, served as examiner in conjunction with Dr. Carter, of Piedmont Sanatorium, at the Prince Edward Clinic.

Dr. H. W. Carter,

Of Washington, N. C., was elected president of the Tri-County Medical Society, composed of physicians residing in Martin, Pitt and Beaufort Counties, N. C., which was recently organized at a meeting held in Washington, N. C.

Dr. Alonzo Myers,

Charlotte, N. C., sailed the latter part of April for Europe, where he expects to do post-graduate work in his specialty—orthopedic surgery—in Paris and Liverpool.

University of Va. Hospital.

The annual report of this hospital shows an excellent work done in that institution during the year ending June 30, 1920. There were 3,681 admissions, whereas the annual admissions twelve years ago were only 850. This hospital was opened in 1901 with twenty beds and now has a capacity of 200 beds. Among the improvements made last year may be mentioned: Improvements at the Nurses' Home amounting to $4,000; x-ray department, $3,000; enlarging the operating room and new equipment, $4,000; enlarging the kitchen and dining room and new equipment, $5,000. An American Red Cross ambulance and several other valuable gifts were received by the hospital.

Dr. Ernest Mosby,

Formerly of Waynesboro, Va., is now located at 99 Gilmer Avenue, Montgomery, Ala.

Dr. John E. Coles,

Who has been spending the winter at Ft. Myers, Fla., has returned to this State and is now at Esmont, Va.

Dr. J. H. Crouch

Notifies us that his address is now Smithfield, R. D. 2, instead of Runnymede, Va.

Dr. C. C. Carr

Has moved from Inman, Va., to Toms Creek, Va.

The W. Va. State Medical Association

Will hold its annual meeting at Charleston, May 24-26, under the presidency of Dr. J. Howard Anderson, of Marytown. Dr. R. A. Ashworth, of Moundsville, is secretary.

Dr. D. A. Dunkley,

Who has been one of the physicians to the Virginia Iron, Coal and Coke Company, at Toms Creek, Va., has moved to Roanoke, Va., and located at 715 Maiden Lane, Virginia Heights.

Dr. H. S. Smyth,

Who was for several years located at Plasterco, Va., is at present at Low Moor, Va.

Vienna Postgraduate Medical School Again at Work.

It is announced by the Dean of the Faculty of the Postgraduate Medical School in Vienna, Austria, that facilities for study and clinics are practically the same as before 1914. Lectures are delivered in German except as special arrangements are made for private English courses. It is stated that living conditions for foreigners are very good and expenses will not be more than $50 to $60 a month. The poor food conditions apply only to the native population. For further information, apply to the Editor of the Wiener Medizinische Wochenschrift, Vienna, IX., Porzellangasse 22.

Dr. Hugh H. Trout

Has been made Post Commander of the American Legion, Roanoke Post No. 3.

Mr. Wortley F. Rudd,

Dean of the School of Pharmacy of the Medical College of Virginia, was chosen to act as councilor in behalf of the Virginia Section, American Chemical Society, at a recent convention held at Rochester, N. Y.

Wanted—A Doctor!

He must be a Christian physician under 35, and have a knowledge of psychiatry or be willing to spend a year or two in preparation for practice among the insane. He is needed for medical missionary work of the Presbyterian Church in China, but need not be a Presbyterian.

Twenty-three years ago the first hospital for insane in China was opened by Dr. John G. Kerr, in Canton, where many years earlier foreign medical work had its beginning. Several years later he was forced to resign on account of age. Much good has been accomplished in this insane hospital, which can accommodate 100, and would have been larger had land and buildings been available for all for whom admission has been sought.

If interested, communicate with Walter I. Clarke, Publicity Director, Presbyterian Church in U. S. A., 156 Fifth Avenue, New York City.—(Adv.)

Wanted—

By experienced physician, graduate of Class A College, a country practice in Virginia, with or without property. Must be unopposed, good roads, good fees. Address Box 176, Wilkesboro, N. C.—(Adv.)

Wanted—

A location in Virginia. Would be glad to get in communication with physician who wishes to sell and vacate field. Must be desirable. Address "J. J.," care *Virginia Medical Monthly*.—(Adv.)

Wanted—

To buy an improved Virginia farm of from 50 to 100 acres, preferably located in Valley of Virginia, good roads, close to good schools, etc., and near a thriving town that would make a good location for a doctor in active practice, age 40. Address communications to "S," care this journal.—(Adv.)

Obituary Record

Dr. Adolphus Franklin Kerr

Died at his home in Clifton Forge, Va., April 15, after an illness of several weeks. He moved to that place from Millboro, Va., a number of years ago and had engaged in active practice to a short time before his death. He was born in Pocahontas County, (then Va., but now W. Va.), in 1848. He received his medical diploma from the Missouri Medical College in 1877 and, before moving to Virginia, was a member of the Medical Examining Board of Arkansas. He joined the Medical Society of Virginia in 1888. He was a prominent Mason and was for a number of years secretary of his local lodge. The interment was made in Millboro. His wife and three children survive him.

Dr. E. A. Thomas,

A prominent physician of Wytheville, Va., died suddenly from heart trouble on April 26. He was in his usual health until the previous evening, when he complained of a pain in his chest, which grew worse, resulting in his death. Dr. Thomas was fifty-two years of age and a graduate in medicine from the University of Virginia in 1890.